

ACIDS, INORGANIC, NEC, DRY (CORROSIVE SOLID, N.O.S.) 4930212

CORROSIVE MATERIAL, ACIDIC UN1759

Acids, inorganic nec, dry are various solid materials that have the property of being corrosive to tissue.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Build dikes to contain flow as necessary

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

ACIDS, INORGANIC, NEC, LIQUID (ACIDS, LIQUID, N.O.S.) 4930201

CORROSIVE MATERIAL, ACIDIC NA1760

Acids, inorganic, nec, liquid are materials which have the property of being corrosive to metals and or tissue. They are generally heavier than water and soluble in water. They are generally noncombustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

ACIDS, LIQUID, N.O.S. (ACIDS, NEC, LIQUID, ORGANIC) 4931404

CORROSIVE MATERIAL, ACIDIC NA1760

Acids, nec, liquid, organic are materials which have the property of being corrosive to metals and/or tissue.

If material on fire or involved in fire

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

ACROLEIN, INHIBITED 4906410
FLAMMABLE LIQUID, POISONOUS UN1092
POLYMERIZABLE

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Acrolein is a colorless to yellow colored volatile liquid with a pungent odor. It is used to make other chemicals, plastics, and as a herbicide. It has a flash point of less than 0. deg. F. It is initially irritating to the eyes and mucous membranes; prolonged exposure may lead to death. The material is subject to polymerization if its containers are subject to heat or if it becomes contaminated. It is soluble in water and it is lighter than water. The vapors are heavier than air.

It weighs 7.0 pounds per gallon.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 5000 feet

If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Neutralize with sodium bisulfate (nahso4)

Apply fluorocarbon-water foam to diminish vapor and fire hazard

Environmental considerations—water spill

Use natural barriers or oil spill control booms to limit spill motion

Add sodium bisulfate

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Combustion products include corrosive or toxic vapors

ACRYLAMIDE SOLUTION (COMBUSTIBLE LIQUID, N.O.S.) 4913187
COMBUSTIBLE LIQUID NA1993

Acrylamide solution is the colorless crystalline solid dissolved in a solvent. It is used for sewage and waste treatment, to make dyes, adhesives, and for many other uses. The flash point of the material depends on the solvent used, but is between 100 and 199 deg. F. It is lighter than water and is soluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

ACRYLAMIDE SOLUTION (FLAMMABLE LIQUID, N.O.S.) 4909183
FLAMMABLE LIQUID UN1993

Acrylamide solution is the colorless crystalline solid dissolved in a solvent. It is used for sewage and waste treatment, to make dyes, adhesives, and for many other uses. The flash point of the material depends on the solvent used, but is less than 100 deg. F. It is lighter than water and is soluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

ACRYLIC ACID 4931405
CORROSIVE MATERIAL, ACIDIC, COMBUSTIBLE UN2218

Acrylic acid is a colorless liquid. It is combustible and it has a flash point of 130 deg. F. It is soluble in water. It is corrosive to metals and tissue. Prolonged exposure to fire or heat can cause the material to polymerize. If polymerization takes place in a container violent rupture may occur.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet

ACRYLONITRILE 4906420
FLAMMABLE LIQUID, POISONOUS UN1093
POLYMERIZABLE
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Acrylonitrile is a clear colorless liquid with a strong pungent odor. It is used in insecticides and to make plastics, fibers and other chemicals. It has a flash point of 32 deg. F. It may polymerize if contaminated with strong bases or if the container is subject to heat as in fire conditions. Prolonged exposure to the vapors or skin contact may result in death. It is lighter than water and is soluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

It weighs 6.7 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
- If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—leak spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

- Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents

- Apply "universal" gelling agent to immobilize spill

Environmental considerations—water spill

- Use natural barriers or oil spill control booms to limit spill motion
- Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material

- Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms

- Add calcium hypochlorite

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Combustion products include corrosive or toxic vapors

ACTIVE PRIMARY AMYL ALCOHOL (ALCOHOL, N.O.S.) 4913106

COMBUSTIBLE LIQUID UN1987

Active primary amyl alcohol is a clear colorless liquid. It has a flash point of 115 deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ACTIVE SEC-AMYL ALCOHOL (ALCOHOL, N.O.S.) 4909106

FLAMMABLE LIQUID UN1987

Active sec-amyl alcohol is a clear colorless liquid. It has a flash point of 89 deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ACTUATING CARTRIDGE, EXPLOSIVE (FIRE EXTINGUISHER OR VALVE) 4903305

CLASS C EXPLOSIVE

Actuating cartridge, explosive is a small metal or fiber housing containing a small amount of explosive and is used to activate remotely controlled fire extinguishers and other apparatus.

If material on fire or involved in fire

- Flood with water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Approach fire with caution
- Avoid breathing dusts, and fumes from burning material
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 1500 feet

ADDITIVES, FUEL OIL, GASOLINE OR LUBRICATING OIL, CONTAINING LESS THAN 50% BY WEIGHT PETROLEUM OIL (FLAMMABLE LIQUID, N.O.S.) 4910535

FLAMMABLE LIQUID UN1993

Additives, fuel oil, gasoline or lubricating oil are various colored liquids having a petroleum-like odor. Their flash point is below 100 deg. F. They are lighter than water and insoluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ADDITIVES, FUEL OIL, GASOLINE OR LUBRICATING OIL, CONTAINING LESS THAN 50% BY WEIGHT OF PETROLEUM (COMBUSTIBLE LIQUID, N.O.S.) 4915535
COMBUSTIBLE LIQUID NA1993

Additives, fuel oil, gasoline or lubricating oil, are various colored liquids having a petroleum-like odor. They have a flash point between 100 and 200 deg. F. They are lighter than water and insoluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ADHESIVE, N.O.S. 4910504
FLAMMABLE LIQUID NA1133

Adhesive, n.o.s. is the solution of various gums and resins in various solvents. The liquids are quite thick and range from a clear colorless to a black "tar". The flash point will depend on the solvent used, but it will be below 100 deg. F. The hazard of this material is flammability.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ADHESIVE, N.O.S. 4915504
COMBUSTIBLE LIQUID NA1133

Adhesive, n.o.s. is the solution of various gums and resins in various solvents. The liquids are quite thick and range from a clear colorless to a black "tar". The flash point will depend on the solvent used, but it will be between 100 and 199 deg. F. The hazard of this material is combustibility.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective

- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- If material not on fire and not involved in fire**
- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ADIPIC ACID 4966110
ORM-E NA9077
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Adipic acid is a white crystalline solid. It is used to make plastics and foams and for other uses. It is insoluble in water. It will burn though it may take some effort to ignite.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors or dusts
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Remove trapped material with suction hoses
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

AFTER SHAVE LOTIONS (COMBUSTIBLE LIQUID, N.O.S.) 4915424

COMBUSTIBLE LIQUID NA1993

After shave lotions may contain significant amounts of alcohol. Their flash point is between 100 and 199 deg. F. They are lighter than water and soluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to disperse vapors and dilute standing pools of liquid
Personnel protection
 Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

AFTER SHAVE LOTIONS (FLAMMABLE LIQUID, N.O.S.) 4910424

FLAMMABLE LIQUID UN1993

After shave lotions may contain significant amounts of alcohol. Their flash point is below 100 deg. F. They are lighter than water and soluble in water. Their vapors are heavier than air.

If material on fire or involved in fire
 Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical
If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection
 Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

AIR CONDITIONING MACHINE, FLAMMABLE GAS (See REFRIGERATING MACHINE, FLAMMABLE GAS 4905867)

AIR CONDITIONING MACHINE, FLAMMABLE LIQUID (See REFRIGERATING MACHINE, FLAMMABLE LIQUID 4910157)

AIR CONDITIONING MACHINE, NONFLAMMABLE GAS (See REFRIGERATING MACHINE, NONFLAMMABLE GAS 4904867)

**AIR, COMPRESSED 4904501
NONFLAMMABLE GAS UN1002**

Air, compressed is ordinary air, compressed and shipped in cylinders under pressure.

If material involved in fire
 Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
If material not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Attempt to stop leak if without hazard
Personnel protection
 Wear protective gloves and goggles
 Do not handle broken packages without protective equipment
 Approach fire with caution

**AIRCRAFT ROCKET ENGINE (COMMERCIAL) 4917405
FLAMMABLE SOLID NA2791**

Aircraft rocket engine (commercial) consists of a solid metal case containing a solid composite fuel—not classed as an explosive, and containing no explosive material or element.

If material on fire or involved in fire
 Flood with water
 Cool all affected containers with flooding quantities of water
If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
Personnel protection
 Avoid breathing fumes from burning material
Evacuation
 If fire is prolonged and material is confined in the container—evacuate for a radius of 5000 feet
 If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet

**AIRCRAFT ROCKET ENGINE IGNITER (COMMERCIAL) 4917410
FLAMMABLE SOLID UN2792**

Aircraft rocket engine igniter (commercial) are devices containing a small quantity of ignition material. They must be packaged in sealed metal containers.

If material on fire or involved in fire
 Flood with water
 Cool all affected containers with flooding quantities of water
If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away

ALCOHOL DISTILLATES, SYNTHETIC (ALCOHOL, N.O.S.) 4915401

COMBUSTIBLE LIQUID UN1987

Alcohol distillates, synthetic are materials having a closed cup flash point between 100 and 199 deg. F. The hazard is combustibility.

If material on fire or involved in fire
 Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical
If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to knock-down vapors

Personnel protection
 Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

ALCOHOL DISTILLATES, SYNTHETIC (ALCOHOL, N.O.S.) 4910401

FLAMMABLE LIQUID UN1987

Alcohol distillates, synthetic are materials having a closed cup flash point of less than 100 deg. F. The hazard is flammability.

If material on fire or involved in fire
 Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

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If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**ALCOHOL IN BOND, FREE OF INTERNAL REVENUE TAX (ALCOHOLIC BEVERAGE) 4910102
FLAMMABLE LIQUID UN1170**

Alcohol in bond is a clear colorless to amber colored liquid with a characteristic odor. It has a flash point of less than 100 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**ALCOHOL IN BOND, FREE OF INTERNAL REVENUE TAX (ALCOHOLIC BEVERAGE) 4915102
COMBUSTIBLE LIQUID UN1170**

Alcohol in bond is a clear colorless to amber colored liquid with a characteristic odor. It has a flash point between 100 and 199 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**ALCOHOL OR SPIRITS, FRUIT, EXCEPT GRAPE, NEUTRAL, IN BOND (ALCOHOLIC BEVERAGE) 4915104
COMBUSTIBLE LIQUID UN1170**

Alcohol or spirits, fruit, except grape, neutral is a clear colorless to variable colored liquid with a characteristic odor. It has a flash point of between 100 and 199 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**ALCOHOL OR SPIRITS, FRUIT, EXCEPT GRAPE, NEUTRAL, IN BOND (ALCOHOLIC BEVERAGE) 4910104
FLAMMABLE LIQUID UN1170**

Alcohol or spirits, fruit, except grape, neutral is a clear colorless to variable colored liquid with a characteristic odor. It has a flash point of less than 100 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

ALCOHOL OR SPIRITS, GRAPE, NEUTRAL IN BOND 4910103
(ALCOHOLIC BEVERAGE)

FLAMMABLE LIQUID UN1170

Alcohol or spirits, grape, neutral is a clear colorless to variable colored liquid with a characteristic odor. It has a flash point of less than 100 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ALCOHOL OR SPIRITS, GRAPE, NEUTRAL IN BOND 4915103
(ALCOHOLIC BEVERAGE)

COMBUSTIBLE LIQUID UN1170

Alcohol or spirits, grape, neutral is a clear colorless to variable colored liquid with a characteristic odor. It has a flash point between 100 and 199 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ALCOHOL, CONTAMINATED, SUITABLE FOR ONLY 4910501
BLENDING OR REDISTILLING PURPOSES
(ALCOHOL, N.O.S.)

FLAMMABLE LIQUID UN1987

Alcohol, contaminated, suitable only for blending or redistilling purposes is a clear colorless to dark colored liquid. It has a flash point of less than 100 deg. F. It is lighter than water and generally is soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ALCOHOL, CONTAMINATED, SUITABLE ONLY FOR 4915501
BLENDING OR REDISTILLING PURPOSES
(ALCOHOL, N.O.S.)

COMBUSTIBLE LIQUID NA1983

Alcohol, contaminated, suitable only for blending or redistilling purposes is a clear colorless to dark colored liquid. It has a flash point between 100 and 199 deg. F. It is lighter than water and generally is soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ALCOHOL, N.O.S. 4913103
COMBUSTIBLE LIQUID UN1987

Alcohol, n.o.s. is the proper shipping name for the family of organic chemicals called "alcohols". Those classed as combustible liquid have a flash point between 100 and 199 deg. F. Most alcohols, n.o.s. are soluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

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If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection
 Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

ALCOHOL, N.O.S. 4909105
FLAMMABLE LIQUID UN1987

Alcohol, n.o.s. is the proper shipping name for the family of organic chemicals called "alcohols". Their flash point is less than 100 deg. F. Most alcohols, n.o.s. are soluble in water. Their vapors are heavier than air. Their main hazard is flammability.

If material on fire or involved in fire
 Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection
 Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

ALCOHOLS, FATTY OR CYCLIC, ETHOXYLATED 4915108
(ALCOHOL, N.O.S.)
COMBUSTIBLE LIQUID NA1993

Alcohols, fatty or cyclic, ethoxylated are clear colorless liquids. their flash point is between 100 and 199 deg. F. They are lighter than water and are generally insoluble in water. Their vapors are heavier than air.

If material on fire or involved in fire
 Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection
 Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

ALCOHOLS, FATTY OR CYCLIC, ETHOXYLATED 4910111
(ALCOHOL, N.O.S.)
FLAMMABLE LIQUID UN1987

Alcohols, fatty or cyclic, ethoxylated are clear colorless liquids. their flash point is less than 100 deg. F. They are lighter than water and are generally insoluble in water. Their vapors are heavier than air.

If material on fire or involved in fire
 Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection
 Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

ALDOL (COMBUSTIBLE LIQUID, N.O.S.) 4913105
COMBUSTIBLE LIQUID NA1993

Aldol is a clear colorless to pale yellow syrupy liquid. It has a flash point of 150 deg. F. It is heavier than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire
 Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection
 Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

ALDRIN 4921403
POISON B NA2761
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Aldrin is a brown to white crystalline solid. It is insoluble in water and is non-combustible. It is toxic by inhalation and skin absorption. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing vapors or dusts

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Remove trapped material with suction hoses

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

ALDRIN MIXTURE, DRY (WITH MORE THAN 65% ALDRIN) 4921407

POISON B NA2761
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Aldrin mixture, dry is a white to brown crystalline solid. Aldrin itself is non-combustible and insoluble in water. The other material in the mixture may or may not be combustible or water soluble. It is toxic by inhalation (dusts, etc) and by skin absorption. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use "alcohol" foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing vapors or dusts

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Remove trapped material with suction hoses

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

ALDRIN MIXTURE, DRY, WITH 65% OR LESS ALDRIN OR-M-A 4941109
NA2761

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Aldrin mixture, dry, is a white to brown colored solid. It is used as an insecticide. Aldrin, itself, is noncombustible and insoluble in water. The other material in the mixture may or maybe combustible or water soluble. It may cause sickness due to inhalation of dust or by skin absorption. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone- 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Keep upwind

Wear boots, protective gloves, and goggles

Avoid breathing vapors or dusts

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Remove trapped material with suction hoses

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

ALDRIN MIXTURE, LIQUID (WITH MORE THAN 60% ALDRIN) 4921406

POISON B NA2762
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Aldrin mixture, liquid is a colorless to brown colored liquids. Aldrin itself is a non-combustible solid but the liquid mixture may be flammable combustible or non-combustible depending on the flammable property of the solvent. Its vapors are heavier than air. It is toxic by inhalation and skin absorption. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

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If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

Use natural barriers or oil spill control booms to limit spill motion
Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material
Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**ALDRIN MIXTURE, LIQUID, WITH 60% OR LESS . 4941108
ALDRIN**

**ORM-A NA2762
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)**

Aldrin mixture, liquid is a colorless to brown colored liquid. It is used as an insecticide. Aldrin itself is a noncombustible solid, but the liquid may be combustible or noncombustible depending upon the flammable property of the liquid. Its vapors are heavier than air. It can cause sickness due to inhalation of the vapors or by skin absorption. In case of damage to, or leaking from containers of this material contact the pesticide network. Telephone- 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

Use natural barriers or oil spill control booms to limit spill motion
Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material
Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

ALDRIN, CAST SOLID

4941107

ORM-A

NA2761

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Aldrin, cast solid is a brown to white solid. It is used as an insecticide. If the large pieces are broken up or powdered, it is toxic by inhalation and skin absorption. It is insoluble in water and noncombustible. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone- 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire
lighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**ALKALINE CORROSIVE BATTERY FLUID
CORROSIVE MATERIAL, BASIC**

4935210

UN2797

Alkaline corrosive battery fluid consists of a water solution of potassium hydroxide. It is corrosive to metals and tissue.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

**ALKALINE CORROSIVE BATTERY FLUID PACKED
WITH BATTERY CHARGER, RADIO CURRENT
SUPPLY DEVICE OR ELECTRONIC EQUIPMENT
AND ACTUATING DEVICES
CORROSIVE MATERIAL, BASIC**

4936565

NA2797

Alkaline corrosive battery fluid packed with battery charger, radio current supply device or electronic equipment and actuating devices consist of containers of alkaline corrosive battery fluid. Packed in the same outside shipping container with battery charger, radio current supply device or electronic equipment and actuating devices. The alkaline corrosive battery fluid is soluble in water with evolution of heat. It is corrosive to metals and tissue.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog
Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with
copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involv-
ing this material
If contact with the material anticipated, wear full protective clothing

**ALKALINE CORROSIVE BATTERY FLUID WITH
EMPTY STORAGE BATTERY** 4935215

CORROSIVE MATERIAL, BASIC UN2797

Alkaline corrosive battery fluid with empty storage battery is the stor-
age battery packed together with containers of the battery fluid. The
fluid is a water solution of potassium hydroxide. It is corrosive to metals
and tissue.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with
copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

ALKALINE CORROSIVE LIQUID, N.O.S. 4935220

CORROSIVE MATERIAL, BASIC NA1719

Alkaline corrosive liquid, n.o.s. are materials having the property of
being corrosive to metals and/or tissue. Most of these materials are
water soluble.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with
copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

ALKANESULFONIC ACID

CORROSIVE MATERIAL, ACIDIC

4931408

UN2584

Alkanesulfonic acid is a mixture of methane, ethane, and propane
sulfonic acids which is a colorless to amber colored liquid. It is soluble
in water with release of heat. It is corrosive to metals and tissue.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with
copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

ALL FREIGHT RATE SHIPMENTS, NEC (TOFC) 4950150

Consult the shipping papers for the exact contents of the car, con-
tainer, or trailer.

ALLYL ALCOHOL

FLAMMABLE LIQUID, POISONOUS 4907425

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4) UN1098

Allyl alcohol is a clear colorless liquid with a mustard-like odor. It has
a flash point of 70 deg. F. It is toxic by inhalation and ingestion. It is
lighter than water and soluble in water. Its vapors are heavier than air.
It weighs 7.1 pounds per gallon.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of
liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with
copious amounts of water or soap and water

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Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents

Apply "universal" gelling agent to immobilize spill

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

ALLYL BROMIDE

4907410

FLAMMABLE LIQUID, POISONOUS

UN1099

Allyl bromide is a clear colorless to light yellow liquid with an irritating, unpleasant odor. It has a flash point of 30 deg. F. It is an eye, skin, and respiratory irritant. Prolonged exposure of the skin to allyl bromide may result in toxic amounts of the material being absorbed. It is heavier than water and slightly soluble in water.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

ALLYL CHLORIDE

4907412

FLAMMABLE LIQUID, POISONOUS

UN1100

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Allyl chloride is a clear colorless liquid with an unpleasant pungent odor. It has a flash point of -20 deg. F. Vapor is irritating to skin, eyes and mucous membranes. Prolonged exposure to the liquid or vapor can result in death by inhalation or skin absorption. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

It weighs 7.8 pounds per gallon.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents

Apply "universal" gelling agent to immobilize spill

Environmental considerations—water spill

Use natural barriers or oil spill control booms to limit spill motion
Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material
Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Remove trapped material with suction hoses

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors
Combustion products include corrosive or toxic vapors

ALLYL CHLOROFORMATE (OR) ALLYL

4907607

CHLOROCARBONATE

FLAMMABLE LIQUID, CORROSIVE

UN1722

Allyl chloroformate is a colorless liquid with a pungent odor. It has a flash point of 88 deg. F. It is corrosive to metals and tissue. It is decomposed by water to give hydrochloric acid, a corrosive material, with evolution of heat. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use "alcohol" foam, carbon dioxide or dry chemical
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Do not use water on material itself

If large quantities of combustibles are involved, use water in flooding quantities as spray and fog

Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors
Do not use water on material itself
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

ALLYL TRICHLOROSILANE 4934205
CORROSIVE MATERIAL, ACIDIC, FLAMMABLE UN1724

Allyl trichlorosilane is a colorless liquid with a pungent odor. It is flammable and has a flash point of 95 deg. F. It is readily decomposed by moisture or water to hydrochloric acid with evolution of heat. It is corrosive to metals and tissue.

If material on fire or involved in fire

Use dry chemical, carbon dioxide, or dry sand
Do not use water on material itself
If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
Use water spray to absorb vapors
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors
Do not use water on material itself
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

ALUMINUM ALKYL 4906011
FLAMMABLE LIQUID UN2545

Aluminum alkyl is a clear colorless liquid. It is used to make other chemicals. It ignites spontaneously on contact with air. It reacts violently with water and most chemicals.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Do not use water
Use graphite, soda ash or powdered sodium chloride

If material not on fire and not involved in fire

Do not use water
Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep material dry

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

ALUMINUM BROMIDE, ANHYDROUS, SOLID 4932301
CORROSIVE MATERIAL, ACIDIC UN1725

Aluminum bromide, anhydrous solid is a white to yellowish-red lumpy solid with a pungent odor. It reacts with water to form hydrobromic acid and aluminum hydroxide with release of heat. It is corrosive to metals and tissue.

If material involved in fire

Do not use water on material itself
If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
Use water spray to absorb vapors

If material not involved in fire

Keep material out of water sources and sewers
Do not use water on material itself
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

ALUMINUM CHLORIDE, DRY (CORROSIVE SOLID, 4932302
N.O.S.) UN1759

Aluminum chloride, dry is a white to grey powder with a pungent odor. It reacts with water to form hydrochloric acid and aluminum hydroxide with release of heat. It is corrosive to tissue.

If material involved in fire

Do not use water on material itself
If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
Use water spray to absorb vapors

If material not involved in fire

Keep material out of water sources and sewers
Do not use water on material itself
Neutralize spilled material with crushed limestone, soda ash, or lime

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Personnel protection

Avoid breathing vapors
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

ALUMINUM HYDRIDE FLAMMABLE SOLID WATER REACTIVE

4916403
UN2463

Aluminum hydride is a colorless to white solid. It reacts with water to form aluminum hydroxide and hydrogen, a flammable gas. The heat of this reaction may be sufficient to ignite the hydrogen. Prolonged exposure of aluminum hydride to heat may result in its spontaneous decomposition. It may react violently with oxidizers.

If material on fire or involved in fire

Do not use water
Use graphite, soda ash or powdered sodium chloride

If material not on fire and not involved in fire

Do not use water
Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep material dry

Personnel protection

Avoid breathing dusts, and fumes from burning material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

ALUMINUM LIQUID (OR PAINT) FLAMMABLE LIQUID

4910101
UN1263

Aluminum liquid or paint is a silvery colored liquid. It has a flash point of less than 100 deg. F. It is generally insoluble in water and its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

ALUMINUM METALLIC POWDER (POWDER, NEC, ALUMINUM) FLAMMABLE SOLID

4916708
UN1396

Aluminum, metallic powder is a light grey or silvery colored powdered metal. It is easily ignited and burns with an intense flame.

If material on fire or involved in fire

Do not use water
Use suitable dry powder

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Do not attempt to sweep up dry material

Personnel protection

Wear boots, protective gloves, and goggles
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Avoid breathing dusts

ALUMINUM NITRATE OXIDIZER

4918701
UN1438

Aluminum nitrate is a white crystalline solid. It is used in petroleum refining, in dyeing, in leather tanning, and for many other uses. It absorbs moisture from the air and dissolves in it. The material is soluble in water. It is non combustible but it will accelerate the burning of combustible materials. If large quantities are involved or the combustible material is finely divided an explosion may result. Prolonged exposure of the material to fire or heat may result in an explosion. Toxic oxides of nitrogen are produced in fires involving this material.

If material on fire or involved in fire

Flood with water
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 2500 feet

ALUMINUM PHOSPHATE SOLUTION CORROSIVE MATERIAL, ACIDIC

4932304
NA1760

Aluminum phosphate solution is the crystalline solid dissolved in phosphoric acid. Aluminum phosphate itself is insoluble in water. It is corrosive to metals and tissue.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

ALUMINUM PHOSPHIDE
FLAMMABLE SOLID, POISONOUS
WATER REACTIVE

4916305
UN1397

Aluminum phosphide is a dark grey or dry yellow crystalline solid. It reacts with moisture to give phosphine, a flammable poisonous gas. Normally the phosphine will spontaneously ignite in contact with air. If there is an excess of water, this fire of phosphine will not normally ignite surrounding combustible material.

If material on fire or involved in fire

Do not use water
Use dry chemical or carbon dioxide

If material not on fire and not involved in fire

Do not use water
Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep material dry

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

ALUMINUM SULFATE
ORM-E

4963303
NA9078

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Aluminum sulfate is a white crystalline solid. It is used in paper making, in fire-fighting foams, in sewage treatment and water purification, and for many other uses. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

ALUMINUM SULFATE SOLUTION
ORM-B

4944165
NA1760

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Aluminum sulfate solution is the white crystalline solid dissolved in water. It is used in paper making, in fire fighting foams, as a fire proofing agent, in sewage treatment and water purification, and for many other uses. It is non-combustible. It is corrosive to aluminum.

It weighs 10.9 pounds per gallon.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

ALUMINUM SULPHATE FLUOSULPHATE MIXTURE,
FLUORINE CONTENT NOT TO EXCEED 25%
(ALUMINUM SULFATE)

4963304

ORM-E

NA9078

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Aluminum sulphate fluosulphate mixture is a white solid. It is soluble in water.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

ALUMINUM SULPHATE, NOT MORE THAN 5%
ACTIVATED CARBON (ALUMINUM SULFATE)

4963305

ORM-E

NA9078

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Aluminum sulphate, not more than 5% activated carbon is a light grey solid. It is used to make ethane. Only the aluminum sulphate is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

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Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

ALUMINUM, METALLIC, POWDER (POWDERS, ALUMINUM) 4916707**FLAMMABLE SOLID UN1396**

Aluminum, metallic, powder is a light grey or silvery colored powdered metal. It is easily ignited and burns with an intense flame.

If material on fire or involved in fire

- Do not use water
- Use suitable dry powder

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Do not attempt to sweep up dry material

Personnel protection

- Wear boots, protective gloves, and goggles
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Avoid breathing dusts

2-(2-AMINOETHOXY) ETHANOL 4935605**CORROSIVE MATERIAL, BASIC NA1760**

2-(2-aminoethoxy) ethanol is colorless liquid with a faint fish like odor. It may burn though it may require some effort to ignite. It is soluble in water. It is corrosive to metals and tissue. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

N-AMINOETHYL PIPERAZINE 4935610**CORROSIVE MATERIAL, BASIC, COMBUSTIBLE UN2815**

N-aminoethyl piperazine is a colorless liquid with a faint fish-like odor. It is combustible and has a flash point of 199 deg. F. It is soluble in water. It is corrosive to metals and tissue. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

AMINOETHYLETHANOLAMINE (CORROSIVE LIQUID, N.O.S.) 4935674**CORROSIVE MATERIAL UN1760**

Aminoethylethanolamine is a clear colorless liquid having an ammonia-like odor. It is used to make other chemicals. It is corrosive to metals and tissue, it will burn though it may require some effort to ignite. It is lighter than water and soluble in water, its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

N-AMINOPROPYL MORPHOLINE 4935620**CORROSIVE MATERIAL, BASIC NA1760**

N-aminopropylmorpholine is a colorless liquid with a faint fish-like odor. It may burn though it may require some effort to ignite. It is soluble in water, it is corrosive to metals and tissue. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

**BIS-(AMINOPROPYL) PIPERAZINE
CORROSIVE MATERIAL, BASIC**

**4935625
NA1760**

Bis-(aminopropyl) piperazine is a colorless liquid with a faint fish like odor. It solidifies at 59 deg. F. It may burn though it may require some effort to ignite. It is soluble in water. It is corrosive to metals and tissue. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

**AMINOPROPYLDIETHANOL AMINE
CORROSIVE MATERIAL, BASIC**

**4935615
NA1760**

Aminopropyldiethanol amine is a colorless liquid with a faint fishlike odor. It may burn though it may require some effort to ignite. It is soluble in water. It is corrosive to metals and tissue. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

AMMONIA SOLUTION (CONTAINING MORE THAN 44% AMMONIA) 4904220

**NONFLAMMABLE GAS, CORROSIVE UN2073
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)**

Ammonia solution is ammonia gas dissolved in water. It has the characteristic ammonia odor. The solution is corrosive to metals and tissue. Although ammonia is lighter than air, the vapors from a leak will initially hug the ground.

It weighs 7.3 pounds per gallon.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use water spray to absorb vapors

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and gas tight goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

Evacuation

- If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash or cement powder
- Neutralize with vinegar or other dilute acid

Environmental considerations—water spill

- Neutralize with dilute acid or removable strong acid
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Vapor knockdown water is corrosive or toxic and should be diked for containment

AMMONIACAL LIQUOR (COMPRESSED GAS, N.O.S.) 4904221
NONFLAMMABLE GAS, CORROSIVE UN1956

Ammoniacal liquor is the solution in water of various ammonium salts and ammonia gas. It has so much ammonia in it that there is pressure in excess of 40 psi at 70 deg. F. The solution is corrosive. Although ammonia is lighter than air, the vapors from a leak initially hug the ground.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use water spray to absorb vapors

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear boots, protective gloves, and gas tight goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

Evacuation

If material leaking (not on fire), downwind evacuation must be considered

AMMONIUM ACETATE 4966708
ORM-E NA9079
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Ammonium acetate is a white crystalline solid. It is used in chemical analysis, in pharmaceuticals, in preserving foods, and for other uses. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Keep upwind

Wear boots, protective gloves, and goggles

Avoid breathing vapors or dusts

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with dilute acid or removable strong acid

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

AMMONIUM ARSENATE, SOLID 4923201
POISON B UN1546

Ammonium arsenate, solid is a white crystalline solid. It is soluble in water and toxic by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

AMMONIUM BENZOATE 4966304
ORM-E NA9080
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Ammonium benzoate is a white crystalline solid. It is used in medicine and as a food preservative. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Keep upwind

Wear boots, protective gloves, and goggles

Avoid breathing vapors or dusts

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with dilute acid or removable strong acid

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

AMMONIUM BICARBONATE 4966308
ORM-E NA9081
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Ammonium bicarbonate is a white crystalline solid having the odor of ammonia. It is used to make other ammonium compounds, in food processing, and for other uses. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Keep upwind

Wear boots, protective gloves, and goggles

Avoid breathing vapors or dusts

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire
fighting water

Environmental considerations—water spill

Neutralize with dilute acid or removable strong acid

AMMONIUM BISULFITE SOLUTION

4932348

CORROSIVE MATERIAL

NA2693

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Ammonium bisulfite solution is the white crystalline solid dissolved in water having an odor of burning sulfur. It is corrosive to metals and tissue

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Apply fluorocarbon-water foam to diminish vapor and fire hazard

Environmental considerations—water spill

Add calcium hypochlorite

Neutralize with dilute acid or removable strong acid

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

AMMONIUM BISULFITE, SOLID

4944142

ORM-B

NA2693

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Ammonium bisulfite, solid is a colorless crystalline solid. It is used in the manufacture of other chemicals. It is soluble in water. It is non-combustible. It is corrosive to aluminum.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Keep upwind

Wear boots, protective gloves, and goggles

Avoid breathing vapors or dusts

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Add calcium hypochlorite

Neutralize with dilute acid or removable strong acid

Adjust pH to neutral (pH-7)

AMMONIUM CARBAMATE

4941145

ORM-A

NA9083

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Ammonium carbamate is a white crystalline solid. It is used as a fertilizer. It is soluble in water.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Keep upwind

Wear boots, protective gloves, and goggles

Avoid breathing vapors or dusts

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with dilute acid or removable strong acid

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Vapor knockdown water is corrosive or toxic and should be diked for containment

AMMONIUM CARBONATE

4941149

ORM-A

NA9084

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Ammonium carbonate is a colorless crystalline solid or a white powder with a strong odor of ammonia. It is used to make other ammonium compounds, in pharmaceuticals, in food processing, and for many other uses. It is non-combustible. It is soluble in water.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Keep upwind

Wear boots, protective gloves, and goggles

Avoid breathing vapors or dusts

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with dilute acid or removable strong acid

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Vapor knockdown water is corrosive or toxic and should be diked for containment

AMMONIUM CHLORIDE 4966316
ORM-E NA9085
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)
Ammonium chloride is a white crystalline solid. It is used to make other ammonium compounds, as a soldering flux, as a fertilizer, and for many other uses. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with dilute acid or removable strong acid

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

v0 Dig a pit, pond, lagoon, holding area to contain liquid or solid material
86 Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with dilute acid or removable strong acid
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

AMMONIUM DICHROMATE (AMMONIUM BICHROMATE) 4916701

FLAMMABLE SOLID, OXIDIZING UN1439
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Ammonium dichromate is a bright orange red crystalline solid. It is readily ignited and burns producing a voluminous green residue. If heated in a closed container, the container may rupture due to the decomposition of the material. It may also act as a strong oxidizing agent if mixed with or contaminated with combustible material. It is soluble in water.

If material on fire or involved in fire

Flood with water

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Add sodium bisulfite
Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

AMMONIUM FLUOBORATE 4944125
ORM-B NA9088
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Ammonium fluoborate is a white solid. It is used in metal plating and finishing. It is corrosive to aluminum.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

AMMONIUM CHROMATE 4963302
ORM-E NA9086
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Ammonium chromate is a yellow crystalline solid. It is used in dyeing, photography, chemical analysis, and as a corrosion inhibitor. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Add sodium bisulfite
Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Adjust pH to neutral (pH-7)
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

AMMONIUM CITRATE, DIBASIC 4966320
ORM-E NA9087
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Ammonium citrate is a white granular solid. It is used in pharmaceuticals and in chemical analysis. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

AMMONIUM FLUORIDE

4944105

ORM-B

UN2505

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Ammonium fluoride is a white crystalline solid. It is used in chemical analysis, in brewing, and as a preservative for wood. It is soluble in water. It is non-combustible. It is corrosive to aluminum.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
- Adjust pH to neutral (pH-7)
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

AMMONIUM HYDROGEN FLUORIDE SOLUTION

4932307

CORROSIVE MATERIAL, ACIDIC

UN2817

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Ammonium hydrogen fluoride solution is the white crystalline solid dissolved in water. It is corrosive to metals and tissue.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash or cement powder
- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Vapor knockdown water is corrosive or toxic and should be diked for containment

AMMONIUM HYDROGEN FLUORIDE, SOLID

4932303

CORROSIVE MATERIAL

UN1727

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Ammonium hydrogen fluoride, solid is a white crystalline solid. It is used to sterilize food processing equipment, in chemical analysis, for electroplating and for many other uses. It is soluble in water. It is corrosive to tissue.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Avoid breathing fumes from burning material
- If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

AMMONIUM HYDROXIDE (CONTAINING LESS THAN 12% AMMONIA)

4940347

ORM-A

NA2672

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Ammonium hydroxide is a colorless to milky colored liquid with an odor of ammonia. It is used in cleaning compounds, to make other chemicals, and for many other uses. It is non-combustible and soluble in water with release of heat. It is corrosive to aluminum.

It weighs 7.3 pounds per gallon.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Apply water from as far a distance as possible
- Use water spray to absorb vapors

Continued on next page

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Neutralize with vinegar or other dilute acid

Environmental considerations—water spill

- Neutralize with dilute acid or removable strong acid

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

AMMONIUM HYDROXIDE (CONTAINING NOT LESS THAN 12% BUT NOT MORE THAN 44% AMMONIA) 4935280

CORROSIVE MATERIAL ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454) NA2672

Ammonium hydroxide is a colorless to milky colored liquid with an odor of ammonia. It is used in cleaning compounds, to make other chemicals, and for many other uses. It is non-combustible and soluble in water with release of heat. It is corrosive to metals and tissue.

It weighs 7.3 pounds per gallon.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Apply water from as far a distance as possible
- Use water spray to absorb vapors

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Neutralize with vinegar or other dilute acid

Environmental considerations—water spill

- Neutralize with dilute acid or removable strong acid

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

AMMONIUM NITRATE (NO ORGANIC COATING) OXIDIZER. THERMALLY UNSTABLE

4918311 UN1942

Ammonium nitrate is a white crystalline solid. It is used to make fertilizers and explosives, and as a nutrient in producing antibiotics and yeast. It is soluble in water. The material itself does not readily burn but will do so if contaminated by combustible material. It will accelerate the burning of combustible material. Toxic oxides of nitrogen are produced during combustion.

If material on fire or involved in fire

- Flood with water
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 5000 feet

AMMONIUM NITRATE (ORGANIC COATING) OXIDIZER THERMALLY UNSTABLE

4918312 NA1942

Ammonium nitrate (organic coating) is a white crystalline solid. The individual pieces of the material are coated with some substance in order to make the material more free flowing. It is soluble in water. The material itself will not burn but will readily do so if contaminated by combustible material. It will accelerate the burning of combustible material. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Flood with water
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 5000 feet

AMMONIUM NITRATE FERTILIZER (CONTAINING NO MORE THAN 0.2% CARBON) OXIDIZER THERMALLY UNSTABLE

4918310 UN2067

Ammonium nitrate fertilizer is a greyish white solid in the form of prills. It is soluble in water. The material itself does not readily burn but will readily do so if contaminated by combustible material. It will accelerate the burning of combustible material. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Flood with water
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 5000 feet

**AMMONIUM NITRATE MIXED FERTILIZER
OXIDIZER**

**4918705
UN2069**

Ammonium nitrate mixed fertilizer is a variable colored granular solid. The material is soluble in water. It is noncombustible but it will accelerate the burning of combustible materials. If large quantities of the material are involved in the fire or the combustible material is finely divided an explosion may result. Prolonged exposure of the material to fire or heat may result in an explosion. Toxic oxides of nitrogen are produced in fires involving this material.

If material on fire or involved in fire

- Flood with water
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 2500 feet

**AMMONIUM NITRATE-CARBONATE MIXTURE
OXIDIZER**

**4918734
UN2068**

Ammonium nitrate-carbonate is a greyish white granular solid. It is the mixture of ammonium nitrate and calcium carbonate, i.e. limestone. The ammonium nitrate is soluble in water; the calcium carbonate is not. The material itself is noncombustible, but it will accelerate the burning of combustible materials. Toxic oxides of nitrogen are produced in fires involving this material.

If material on fire or involved in fire

- Flood with water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

**AMMONIUM NITRATE-FUEL OIL MIXTURE
(CONTAINING ONLY PRILLED AMMONIUM
NITRATE AND FUEL OIL)**

4902910

BLASTING AGENT

Ammonium nitrate-fuel oil mixture is a brownish-black granular solid. It is used for blasting rock and in some types of mining. It will accelerate the burning of combustible materials. The ammonium nitrate is soluble in water. If large quantities of this material are involved in a fire, it may explode.

If material on fire or involved in fire

- Low order explosive potential
- Do not fight fires in a cargo of blasting agents
- Evacuate area and let burn

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep spilled material wet
- Wet spilled material before picking it up
- Do not attempt to sweep up dry material

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**AMMONIUM NITRATE-PHOSPHATE
OXIDIZER**

**4918704
UN2070**

Ammonium nitrate-phosphate is a white granular solid. It is used as a fertilizer. It is soluble in water. It is noncombustible but it will accelerate the burning of combustible materials. If large quantities of the material are involved in the fire or the combustible material is finely divided an explosion may result. Prolonged exposure of the material to fire or heat may result in an explosion. Toxic oxides of nitrogen are produced in fires involving this material.

If material on fire or involved in fire

- Flood with water
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 2500 feet

**AMMONIUM NITRATE, MAGNESIA AND PULP
MIXTURE (OXIDIZING MATERIAL, N.O.S)
OXIDIZER**

4918703

UN1479

Ammonium nitrate, magnesia and pulp mixture is a white to light yellow granular solid. The material is soluble in water. It is non-combustible but it will accelerate the burning of combustible materials. If large quantities of the material are involved in the fire or the combustible material is finely divided an explosion may result. Prolonged exposure of the material to fire or heat may result in an explosion. Toxic oxides of nitrogen are produced in fires involving this material.

If material on fire or involved in fire

Flood with water

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 2500 feet

**AMMONIUM NITRATE, SODIUM NITRATE MIXTURE
(OXIDIZING MATERIAL, N.O.S.)
OXIDIZER**

4918702

UN1479

Ammonium nitrate, sodium nitrate mixture is a white to light greyish granular solid. The material is soluble in water. It is non-combustible but it will accelerate the burning of combustible materials. If large quantities of the material are involved in the fire or the combustible material is finely divided an explosion may result. Prolonged exposure of the material to fire or heat may result in an explosion. Toxic oxides of nitrogen are produced in fires involving this material.

If material on fire or involved in fire

Flood with water

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

Approach fire with caution

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 2500 feet

**AMMONIUM NITRATE, SOLUTION (CONTAINING NOT
LESS THAN 15% WATER)
OXIDIZER**

4918774

UN2426

Ammonium nitrate solution is the white crystals dissolved in water. It is used to make fertilizers and explosives. Though the material itself is noncombustible it will accelerate the burning of combustible materials. Toxic oxides of nitrogen are produced in fires involving this material.

If material on fire or involved in fire

Flood with water

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 2500 feet

**AMMONIUM OXALATE
ORM-A**

4940350

NA2449

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Ammonium oxalate is a colorless crystalline solid. It is used as a reagent in chemical analysis, for rust and scale removal, and for many other uses. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Keep upwind

Wear boots, protective gloves, and goggles

Avoid breathing vapors or dusts

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Adjust pH to neutral (pH-7)

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**AMMONIUM PERCHLORATE
CLASS A EXPLOSIVE**

4901550

Ammonium perchlorate is a white crystalline solid. It is used in making certain solid rocket propellants. It is smaller than 15 micron size or larger sized material that has been dried of its water of crystallization. The material itself does not readily burn, but will do so if contaminated by combustible material. Fires involving ammonium perchlorate or a combustible material may result in an explosion.

If material on fire or involved in fire

Dangerously explosive

Do not fight fires in a cargo of explosives

Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep spilled material wet

Wet spilled material before picking it up

Do not attempt to sweep up dry material

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

**AMMONIUM PERCHLORATE
OXIDIZER, THERMALLY UNSTABLE**

**4918320
UN1442**

Ammonium perchlorate is a white crystalline solid that is soluble in water. It is used to make rocket propellants, explosives and for other uses. Ammonium perchlorate that is smaller than 15 micron size or larger sized material that has been dried of its water of crystallization is classed as a class a explosive. The material itself does not readily burn, but will do so if contaminated by combustible material. Fires involving ammonium perchlorate and combustible material may result in an explosion. Prolonged exposure of ammonium perchlorate and or its containers to heat or fire may result in an explosion.

If material on fire or involved in fire

Flood with water

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

Approach fire with caution

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 5000 feet

**AMMONIUM PERMANGANATE
OXIDIZER, THERMALLY UNSTABLE**

**4918322
NA9190**

Ammonium permanganate is a violet brown or dark purple crystalline solid. It is soluble in water. The material itself does not burn. It accelerates the burning of combustible materials. Contamination by some combustible materials may result in spontaneous ignition. Prolonged exposure of ammonium permanganate and or its containers to fire or heat may result in an explosion.

If material on fire or involved in fire

Flood with water

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 2500 feet

**AMMONIUM PICRATE, WET (WITH 10% OR MORE
WATER)**

4917125

FLAMMABLE SOLID

UN1310

Ammonium picrate, wet is a slurry or sludge of yellow crystals. Ammonium picrate dry is a high explosive. dry it is easily ignited and burns vigorously. If large quantities are involved an explosion may result. The wet material will burn, though it may require some effort to ignite. Toxic oxides of nitrogen are produced during combustion.

If material on fire or involved in fire

Dangerously explosive

Flood with water

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Keep spilled material wet

Do not attempt to sweep up dry material

Personnel protection

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 5000 feet

**AMMONIUM SILICOFLUORIDE
ORM-A**

**4944135
UN2854**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Ammonium silicofluoride is a white crystalline solid. It is used as a disinfectant, in etching glass, metal casting, and electroplating. It is soluble in water. It is non-combustible. It is corrosive to aluminum.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Keep upwind

Wear boots, protective gloves, and goggles

Avoid breathing vapors or dusts

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

**AMMONIUM SULFAMATE
ORM-E**

**4966732
NA9089**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Ammonium sulfamate is a white crystalline solid. It is used to flame-proof fabrics and papers, in weed or brush killing products, and for other uses. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Keep upwind

Wear boots, protective gloves, and goggles

Avoid breathing vapors or dusts

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Add calcium hypochlorite

Adjust pH to neutral (pH-7)

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

AMMONIUM SULFIDE SOLUTION**FLAMMABLE LIQUID****UN2683****ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)**

Ammonium sulfide solution is the yellow crystalline material dissolved in a liquid, usually water. It has the odor of rotten eggs. Ammonium sulfide is slowly decomposed by moisture giving off hydrogen sulfide, a flammable gas.

It weighs 9.0 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- Add calcium hypochlorite
- Adjust pH to neutral (pH-7)

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Evolves flammable hydrogen sulfide gas on contact with acids

AMMONIUM TARTRATE**4986336****ORM-E****NA9091****ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)**

Ammonium tartrate is a white crystalline solid. It is used to manufacture fabrics and in medicine. It is soluble in water. It is non-combustible.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Neutralize with dilute acid or removable strong acid
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

AMMONIUM THIOCYANATE CRYSTALS (AMMONIUM THIOCYANATE)**4966738****ORM-E****NA9092****ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)**

Ammonium thiocyanate is a colorless crystalline solid. It is used in chemical analysis, in photography, as a fertilizer, and for many other uses. It is soluble in water. It is non-combustible.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Neutralize with dilute acid or removable strong acid
- Add calcium hypochlorite
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

AMMONIUM THIOCYANATE LIQUOR (AMMONIUM THIOCYANATE)**4966744****ORM-E****NA9092****ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)**

Ammonium thiocyanate liquor is the colorless crystalline solid dissolved in water. It is used to make other chemicals, fertilizer, and for many other uses. It is non-combustible.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

AMMONIUM SULFITE**4966332****ORM-E****NA9090****ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)**

Ammonium sulfite is a colorless crystalline solid. It is used in the manufacture of other chemicals, in medicine, and photography. It is soluble in water. It is non-combustible.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Add calcium hypochlorite
- Adjust pH to neutral (pH-7)

Environmental considerations—air spill

- Evolves flammable hydrogen sulfide gas on contact with acids

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- Neutralize with dilute acid or removable strong acid
- Add calcium hypochlorite
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

AMMONIUM THIOSULFATE

4966750

ORM-E

NA9093

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Ammonium thiosulfate is a white crystalline solid. It is used in photography, in chemical analysis, and for many other uses. It is soluble in water. It is non-combustible.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Neutralize with dilute acid or removable strong acid
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

AMMONIUM THIOSULFATE SOLUTION (AMMONIUM THIOSULFATE)

4966756

ORM-E

NA9093

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Ammonium thiosulfate solution is the white crystalline solid dissolved in water. It is used in photography and for many other uses. It is non-combustible.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

- Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- Neutralize with dilute acid or removable strong acid
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

AMMUNITION FOR CANNON WITH EMPTY

4902110

PROJECTILE

CLASS B EXPLOSIVE

Ammunition for cannon with empty projectile is fixed ammunition which is an assembled unit consisting of the cartridge case containing the propelling charge and primer with empty projectiles. Under prolonged exposure to fire or heat the material can explode.

If material on fire or involved in fire

- Dangerously explosive
- Do not fight fires in a cargo of explosives
- Evacuate area and let burn

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

AMMUNITION FOR CANNON WITH EXPLOSIVE

4901105

PROJECTILE

CLASS A EXPLOSIVE

Ammunition for cannon with explosive projectile is fixed ammunition which is an assembled unit consisting of a cartridge case containing the propelling charge and primer and explosive projectile containing a high explosive. It may be shipped either fuzed or unfuzed. The fuzed ammunition may be sensitive to shock or mechanical impact. Under prolonged exposure to heat or fire it can explode.

If material on fire or involved in fire

- Dangerously explosive
- Do not fight fires in a cargo of explosives
- Evacuate area and let burn

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 5000 feet

AMMUNITION FOR CANNON WITH GAS PROJECTILE

4901110

CLASS A EXPLOSIVE

Ammunition for cannon with gas projectile is fixed ammunition which is an assembled unit consisting of a cartridge case containing the propelling charge and primer, and a projectile containing a gas and a burster. It may be shipped either fuzed or unfuzed. The fuzed ammunition may be sensitive to shock or mechanical impact. Under prolonged exposure to fire or heat it can explode.

Continued on next page

MCD 000009775

If material on fire or involved in fire
 Dangerously explosive
 Do not fight fires in a cargo of explosives
 Evacuate area and let burn

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away

Personnel protection
 Avoid breathing dusts, and fumes from burning material
 Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation
 If the material is on fire or involved in fire evacuate for a radius of 5000 feet

AMMUNITION FOR CANNON WITH ILLUMINATING PROJECTILE CLASS A EXPLOSIVE 4901115

Ammunition for cannon with illuminating projectile is fixed ammunition which is an assembled unit consisting of a cartridge case containing the propelling charge and primer, and a projectile containing a pyrotechnic composition and burster. It may be either shipped fuzed or unfuzed. The fuzed ammunition may be sensitive to shock or mechanical impact. Under prolonged exposure to fire or heat it can explode.

If material on fire or involved in fire
 Dangerously explosive
 Do not fight fires in a cargo of explosives
 Evacuate area and let burn

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away

Personnel protection
 Avoid breathing dusts, and fumes from burning material
 Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation
 If the material is on fire or involved in fire evacuate for a radius of 5000 feet

AMMUNITION FOR CANNON WITH INCENDIARY PROJECTILE CLASS A EXPLOSIVE 4901120

Ammunition for cannon with incendiary projectile is fixed ammunition consisting of a cartridge case containing a propelling charge and a primer and a projectile containing a pyrotechnic composition and a burster. It may be shipped fuzed or unfuzed. The fuzed ammunition may be sensitive to shock or mechanical impact. Under prolonged exposure to heat or fire it can explode.

If material on fire or involved in fire
 Dangerously explosive
 Do not fight fires in a cargo of explosives
 Evacuate area and let burn

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away

Personnel protection
 Avoid breathing dusts, and fumes from burning material
 Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation
 If the material is on fire or involved in fire evacuate for a radius of 5000 feet

AMMUNITION FOR CANNON WITH INERT LOADED PROJECTILE 4902120

CLASS B EXPLOSIVE
 Ammunition for cannon with inert loaded projectile is fixed ammunition which is an assembled unit consisting of the cartridge case containing the propelling charge and primer with inert-loaded projectile. Under prolonged exposure to fire or heat the material can explode.

If material on fire or involved in fire
 Dangerously explosive
 Do not fight fires in a cargo of explosives
 Evacuate area and let burn

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away

Personnel protection
 Avoid breathing dusts, and fumes from burning material
 Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation
 If the material is on fire or involved in fire evacuate for a radius of 2500 feet

AMMUNITION FOR CANNON WITH SMOKE PROJECTILE CLASS A EXPLOSIVE 4901125

Ammunition for cannon with smoke projectile is fixed ammunition consisting of a cartridge case containing a propelling charge and primer, and a projectile containing a smoke producing composition and a burster. It may either be shipped fuzed or unfuzed. The fuzed ammunition may be sensitive to shock or mechanical impact. Under prolonged exposure to heat or fire it can explode.

If material on fire or involved in fire
 Dangerously explosive
 Do not fight fires in a cargo of explosives
 Evacuate area and let burn

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away

Personnel protection
 Avoid breathing dusts, and fumes from burning material
 Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation
 If the material is on fire or involved in fire evacuate for a radius of 5000 feet

AMMUNITION FOR CANNON WITH SOLID PROJECTILE CLASS B EXPLOSIVE 4902130

Ammunition for cannon with solid projectile is fixed ammunition which is an assembled unit consisting of the cartridge case containing the propelling charge and primer with solid projectile. Under prolonged exposure to fire or heat the material can explode.

If material on fire or involved in fire
 Dangerously explosive
 Do not fight fires in a cargo of explosives
 Evacuate area and let burn

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away

Personnel protection
 Avoid breathing dusts, and fumes from burning material
 Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation
 If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**AMMUNITION FOR CANNON WITH TEAR GAS
PROJECTILE
CLASS B EXPLOSIVE**

4902127

Ammunition for cannon with tear gas projectile is fixed ammunition which is an assembled unit consisting of a cartridge case containing the propelling charge and primer, and a projectile containing the tear gas and a burster. It may be shipped either fuzeed or unfuzeed. The fuzeed ammunition may be sensitive to shock or mechanical impact. Under prolonged exposure to fire or heat it can explode and release tear gas.

If material on fire or involved in fire

Dangerously explosive

Do not fight fires in a cargo of explosives

Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Avoid breathing dusts, and fumes from burning material

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**AMMUNITION FOR CANNON WITH TEAR GAS
PROJECTILE
CLASS A EXPLOSIVE**

4901127

Ammunition for cannon with tear gas projectile is fixed ammunition which is an assembled unit consisting of a cartridge case containing tear gas and a burster. It may be shipped either fuzeed or unfuzeed. The fuzeed ammunition may be sensitive to shock or mechanical impact. Under prolonged exposure to fire or heat it can explode and release tear gas.

If material on fire or involved in fire

Dangerously explosive

Do not fight fires in a cargo of explosives

Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Avoid breathing dusts, and fumes from burning material

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

**AMMUNITION FOR CANNON WITHOUT PROJECTILE
CLASS B EXPLOSIVE**

4902140

Ammunition for cannon without projectile is fixed ammunition which is a unit consisting of the cartridge case containing the propelling charge and primer without projectile. Under prolonged exposure to fire or heat the material can explode.

If material on fire or involved in fire

Dangerously explosive

Do not fight fires in a cargo of explosives

Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Avoid breathing dusts, and fumes from burning material

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**AMMUNITION FOR SMALL ARMS WITH EXPLOSIVE
PROJECTILE
CLASS A EXPLOSIVE**

4901130

Ammunition for small arms with explosive projectile is fixed ammunition of less than 20 mm which consists of a cartridge case containing a propelling charge and primer, and a projectile containing a high explosive. It may be shipped either fuzeed or unfuzeed. The fuzeed ammunition may be sensitive to shock or mechanical impact. Under prolonged exposure to fire it can explode.

If material on fire or involved in fire

Dangerously explosive

Do not fight fires in a cargo of explosives

Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Avoid breathing dusts, and fumes from burning material

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

**AMMUNITION FOR SMALL-ARMS WITH INCENDIARY
PROJECTILE
CLASS A EXPLOSIVE**

4901135

Ammunition for small-arms with incendiary projectile is fixed ammunition of less than 20mm consisting of a cartridge case containing a propelling charge and primer, and a projectile containing a pyrotechnic charge. It may be either shipped fuzeed or unfuzeed. The fuzeed ammunition may be sensitive to shock or mechanical impact. Under prolonged exposure to heat or fire it can explode.

If material on fire or involved in fire

Dangerously explosive

Do not fight fires in a cargo of explosives

Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Avoid breathing dusts, and fumes from burning material

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

**AMMUNITION, CHEMICAL, EXPLOSIVE, WITH
IRRITANT
CLASS A EXPLOSIVE**

4901167

Ammunition, chemical, explosive, with irritant may be any type of projectile, bomb, grenade, etc. It contains a material classified as an irritant and a burster. Under prolonged exposure to heat or fire it can explode. The irritant causes discomforting effects such as tearing of the eyes or a choking sensation of the respiratory system from inhalation or contact with small quantities. The irritant may or may not be combustible.

If material on fire or involved in fire

Dangerously explosive

Do not fight fires in a cargo of explosives

Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Continued on next page

Personnel protection

Avoid breathing dusts, and fumes from burning material
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

**AMMUNITION, CHEMICAL, EXPLOSIVE, WITH POISON 4901165
A MATERIAL
CLASS A EXPLOSIVE**

Ammunition, chemical, explosive, with poison a material may be any type of projectile bomb, grenade, etc. It contains a material classified as poison a and a burster. Under prolonged exposure to heat or fire it can explode. The poison a material may cause death by inhalation or skin absorption of very small quantities. The poison a material may or may not be combustible.

If material on fire or involved in fire

Dangerously explosive
Do not fight fires in a cargo of explosives
Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Avoid breathing dusts, and fumes from burning material
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

**AMMUNITION, CHEMICAL, EXPLOSIVE, WITH POISON 4901166
B MATERIAL
CLASS A EXPLOSIVE**

Ammunition, chemical, explosive, with poison b material may be any type of projectile, bomb, grenade, etc. It contains a material classified as poison b and a burster. Under prolonged exposure to heat or fire it can explode. The poison b material may cause death by inhalation, skin absorption, or ingestion of small quantities. The poison b material may not be combustible.

If material on fire or involved in fire

Dangerously explosive
Do not fight fires in a cargo of explosives
Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Avoid breathing dusts, and fumes from burning material
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

**AMYL ACETATE 4909111
FLAMMABLE LIQUID UN1104
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)**

Amyl acetate is a clear colorless liquid having a banana like odor. The flash point may vary from 65 deg. F. to 95 deg. F. It is lighter than water and slightly soluble in water. The vapors are heavier than air, it weighs 7.2 pounds per gallon.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
If material not on fire and not involved in fire
Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents

Apply fluorocarbon-water foam to diminish vapor and fire hazard

Environmental considerations—water spill

Use natural barriers or oil spill control booms to limit spill motion
Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material

Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Remove trapped material with suction hoses

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

**AMYL ACID PHOSPHATE 4933360
CORROSIVE MATERIAL UN2819**

Amyl acid phosphate is a colorless liquid. It is used as a curing agent in paints and plastics and is used in the manufacture of synthetic fibers. It will burn though it may take some effort to ignite. It is heavier than water and is insoluble in water. It is corrosive to metals and tissue. Its vapors are heavier than air.

If material on fire or involved in fire

Use dry chemical, carbon dioxide, or dry sand
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Do not use water on material itself

If large quantities of combustibles are involved, use water in flooding quantities as spray and fog

Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors
Do not use water on material itself

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

TERT-AMYL ALCOHOL (ALCOHOL, N.O.S.)
FLAMMABLE LIQUID

4909112
UN1987

Tert-amyl alcohol is a clear colorless liquid with a camphor like odor. It has a flash point of 67 deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

N-SEC-AMYL ALCOHOL (ALCOHOL, N.O.S.)
FLAMMABLE LIQUID

4909107
UN1987

N-sec-amyl alcohol is a clear colorless liquid. It has a flash point of 94 deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

AMYL CHLORIDE
FLAMMABLE LIQUID

4909115
UN1107

Amyl chloride is a clear, colorless liquid. The flash point may vary from 35 deg. F. to 54 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

AMYL FORMATE
FLAMMABLE LIQUID

4909310
UN1109

Amyl formate is a clear colorless liquid with a plum like odor. It has a flash point of 79 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

AMYL MERCAPTAN
FLAMMABLE LIQUID

4909119
UN1111

Amyl mercaptan is a clear, colorless to light yellow liquid with an offensive odor. It has a flash point of 65 deg. F. It is lighter than water and insoluble in water. Its vapors are lighter than water.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

AMYL NITRATE (COMBUSTIBLE LIQUID, N.O.S.) 4913107
COMBUSTIBLE LIQUID, OXIDIZING NA1993

Amyl nitrate is a clear colorless liquid with an ether-like odor. It is used as an additive for diesel fuels. It has a flash point of 118 deg. F. It will accelerate the burning of combustible materials. It weighs about the same as water and is insoluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

TERT-AMYL PEROXY-2-ETHYLHEXANOATE, 4919108
(TECHNICALLY PURE) UN2898

Tert-amyl peroxy-2-ethylhexanoate, (technically pure) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

AMYL NITRITE 4909121
FLAMMABLE LIQUID UN1113

Amyl nitrite is a clear colorless to yellowish liquid with an ethereal, fruity odor. It is used in medicine and to make other chemicals. It has a flash point of 50 deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

AMYL PHENOL (CORROSIVE LIQUID, N.O.S.) 4935627
CORROSIVE MATERIAL, BASIC UN1760

Amyl phenol is a colorless to straw colored liquid. It is slightly soluble in water. It may burn though it may require some effort to ignite. It is corrosive to tissue.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Neutralize with vinegar or other dilute acid

Environmental considerations—water spill

Neutralize with dilute acid or removable strong acid

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Vapor knockdown water is corrosive or toxic and should be diked for containment

ANILINE OIL, LIQUID 4921410
POISON B, COMBUSTIBLE UN1547

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Aniline oil, liquid is a colorless to brown oily liquid with a characteristic odor. It is used to manufacture other chemicals, especially dyes, photographic chemicals, agricultural chemicals and others. It has a flash point of 158 deg. F. It can react with toluene diisocyanate with the reaction leading to possible ignition. It is heavier than water and slightly soluble in water and its vapors are heavier than air. It is toxic by skin absorption and inhalation. Toxic oxides of nitrogen are produced during combustion of this material.

It weighs 8.5 pounds per gallon.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Apply "universal" gelling agent to immobilize spill

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Remove trapped material with suction hoses

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Combustion products include corrosive or toxic vapors

ANILINE OIL, LIQUID (ANILINE SLUDGE FOR FURNACE USE) 4921492
POISON B UN1547

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Aniline sludge is a thick brown liquid with a characteristic odor. It is combustible though it may require some effort to ignite. It is very slightly soluble in water. It is toxic by inhalation and by skin absorption.

It weighs 8.5 pounds per gallon.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use foam, carbon dioxide or dry chemical

Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Remove trapped material with suction hoses

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

ANIMAL OR POULTRY DIP, NEC, LIQUID 4923905
(POISONOUS LIQUID, N.O.S.)

POISON B NA2810

Animal or poultry dip, nec liquid is variable colored liquid. It is soluble in water and is toxic by ingestion.

If material on fire or involved in fire

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

AMYL TRICHLOROSILANE 4934210
CORROSIVE MATERIAL, ACIDIC, COMBUSTIBLE UN1728

Amyl trichlorosilane is a colorless to yellow liquid with a pungent odor. It is combustible and has a flash point of 145 deg. F. It is readily decomposed by water to hydrochloric acid with evolution of heat. It is corrosive to metals and tissue.

If material on fire or involved in fire

- Use dry chemical, carbon dioxide, or dry sand
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

AMYLAMINE 4909195
FLAMMABLE LIQUID UN1106

Amylamine is a clear colorless liquid with an ammonia-like odor. It is used as a corrosion inhibitor, solvent, flotation agent and in the manufacture of additional chemicals. It has a flash point of 30 deg. F. It is irritating to the eyes and respiratory system. It is lighter than water and soluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

AMYLENE 4908108
FLAMMABLE LIQUID UN1108

Amylenes are clear colorless liquids with a petroleum-like odor. They are volatile liquids having flash points of below 0 deg. F. They are lighter than water and insoluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

ANHYDROUS AMMONIA 4904210
NONFLAMMABLE GAS, CORROSIVE UN1005
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Anhydrous ammonia is a clear colorless gas with a characteristic odor. It is used as a fertilizer, as a refrigerant, and in the manufacture of other chemicals. Although it is classed as a nonflammable gas, it will burn within certain vapor concentration limits, and the fire hazard will increase in the presence of oil or other combustible materials. Its "combustibility" is definitely not a common problem in the event of leakage. It is shipped as a liquid under pressure. Contact with the liquid can cause frostbite. It is soluble in water forming a corrosive liquid. Although ammonia is lighter than air, the vapors from a leak initially hug the ground.

It weighs 5.7 pounds per gallon.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use water spray to absorb vapors

If material not involved in fire

- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and gas tight goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

Evacuation

- If material leaking (not on fire), downwind evacuation must be considered

Continued on next page

MCD 000009781

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 If contact with the material anticipated, wear full protective clothing

ANIMAL OR POULTRY DIP, NEC. OTHER THAN LIQUID (POISONOUS SOLID, N.O.S.) 4923906
POISON B NA2811

Animal or poultry dip, nec. other than liquid is a variable colored solid. It is soluble in water. It is toxic by ingestion, and by inhalation of dusts.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
 Use water in flooding quantities as fog
 Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
 Keep upwind
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 Wear self-contained breathing apparatus when fighting fires involving this material
 If contact with the material anticipated, wear full protective clothing

ANIMAL OR POULTRY FEED CHARCOAL, CRUSHED OR GROUND, (FLAMMABLE SOLID, N.O.S.) 4917386
FLAMMABLE SOLID UN1325

Animal or poultry feed charcoal, crushed or ground is a granular black solid. It is fairly easily ignited. The main hazard in transportation is that of spontaneous heating if the charcoal has not been properly cooled after manufacture or if it becomes wet.

If material on fire or involved in fire

Remove burning material from load if safe and practicable to do so
 Use dry chemical or carbon dioxide
 Use water only if flooding quantities are available

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material dry

ANISOYL CHLORIDE 4931710
CORROSIVE MATERIAL, ACIDIC UN1729

Anisoyl chloride is an amber colored crystalline solid becoming a liquid at 72 deg. F. The liquid fumes in air. It is decomposed by water to give hydrochloric acid and insoluble anisic acid with release of heat. It is corrosive to metals and skin.

If material on fire or involved in fire

Use dry chemical or carbon dioxide
 Do not use water on material itself
 If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
 Use water spray to absorb vapors
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to knock-down vapors
 Do not use water on material itself
 Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 If contact with the material anticipated, wear full protective clothing

ANTI-FREEZE ALCOHOLS (ALCOHOL, N.O.S.) 4910402
FLAMMABLE LIQUID UN1987

Anti-freeze alcohols are materials containing a solvent having a closed cup flash point of less than 100 deg. F. The hazard is flammability.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

ANTI-FREEZE ALCOHOLS (ALCOHOL, N.O.S.) 4915402
COMBUSTIBLE LIQUID UN1987

Anti-freeze alcohols are materials containing a solvent having a closed cup flash point between 100 and 199 deg. F. They are generally lighter than water and soluble in water.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to disperse vapors and dilute standing pools of liquid

Continued on next page

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ANTI-FREEZE COMPOUND, LIQUID

4910105

FLAMMABLE LIQUID

NA1142

- Anti-freeze compounds, liquid have flash points of less than 100 deg. F. They are water soluble and their vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ANTI-FREEZE PREPARATION, LIQUID

4910106

FLAMMABLE LIQUID

NA1142

- Anti-freeze preparation, liquid have flash points of less than 100 deg. F. It is soluble in water.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ANTIFREEZE COMPOUND LIQUID

4915105

COMBUSTIBLE LIQUID

NA1142

- Anti-freeze compounds, liquid which are classed as combustible liquid have flash points between 100 and 199 deg. F. They are soluble in water and their vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ANTIFREEZE PREPARATION, LIQUID

4915106

COMBUSTIBLE LIQUID

NA1142

- Anti-freeze preparation, liquid which are classed as combustible liquid have flash points between 100 and 199 deg. F. It is soluble in water and its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ANTIMONIOUS CHLORIDE (See ANTIMONY TRICHLORIDE 4932316)

ANTIMONY PENTACHLORIDE

4932310

CORROSIVE MATERIAL, ACIDIC

UN1730

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

- Antimony pentachloride is a reddish-yellow fuming liquid with a pungent odor. It is used to make other chemicals, and in chemical analysis. Its fumes are irritating to the eyes and mucous membranes. It is decomposed by water to hydrochloric acid with release of heat. It solidifies at 37 deg. F. It is corrosive to metals and tissue.

If material involved in fire

- Use dry chemical, carbon dioxide, or dry sand
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash or cement powder
- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

- Add caustic soda
- If dissolved, apply sodium sulfide solution to precipitate heavy metals
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates
- Add soda ash
- Allow to aerate

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Vapor knockdown water is corrosive or toxic and should be diked for containment

ANTIMONY PENTACHLORIDE SOLUTION 4932312
CORROSIVE MATERIAL, ACIDIC UN1731
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Antimony pentachloride solution is a reddish-yellow solution of antimony pentachloride in hydrochloric acid. It has a pungent odor and its fumes are irritating to the eyes and mucous membranes. It is decomposed by water into more hydrochloric acid with release of heat. It is corrosive to metals and tissue.

If material involved in fire

- Use dry chemical, carbon dioxide, or dry sand
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash or cement powder
- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

- Add caustic soda
- If dissolved, apply sodium sulfide solution to precipitate heavy metals
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates
- Add soda ash
- Allow to aerate

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Vapor knockdown water is corrosive or toxic and should be diked for containment

ANTIMONY PENTAFLUORIDE 4932005
CORROSIVE MATERIAL, ACIDIC, POISONOUS UN1732

Antimony pentafluoride is a colorless oily liquid. It is used to make other chemicals and as a catalyst in the manufacture of other chemicals. It is decomposed by water to hydrofluoric acid and other materials with release of heat. Its fumes are irritating to the eyes and mucous membranes. It is corrosive to metals and tissue. Hydrofluoric acid causes severe painful skin burns. The material may only be shipped in cylinders. Prolonged exposure of the cylinders to fire or heat may result in their violent rupturing and rocketing.

If material involved in fire

- Use dry chemical, carbon dioxide, or dry sand
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

ANTIMONY POTASSIUM TARTRATE SOLID 4941114
ORM-A UN1551
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Antimony potassium tartrate solid is a colorless crystalline solid or a white powder. It is used in textile and leather processing and as an insecticide. It is soluble in water.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Continued on next page

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Add caustic soda
- If dissolved, apply sodium sulfide solution to precipitate heavy metals
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates
- Adjust pH to neutral (pH-7)
- Allow to aerate

ANTIMONY TRIBROMIDE, SOLID

4932319

CORROSIVE MATERIAL

NA1549

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Antimony tribromide, solid is the yellow crystalline solid. It is used to make other antimony compounds, in chemical analysis, and in dyeing. It is decomposed by water giving an antimony oxide and hydrobromic acid. It is corrosive to tissue.

If material involved in fire

- Use dry chemical, carbon dioxide, or dry sand
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water
- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

- Add caustic soda
- If dissolved, apply sodium sulfide solution to precipitate heavy metals
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates
- Add soda ash
- Allow to aerate

ANTIMONY TRIBROMIDE, SOLUTION

4932317

CORROSIVE MATERIAL

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Antimony tribromide, solution is the yellow crystalline solid dissolved in hydrobromic acid. It is used to make other antimony compounds, in chemical analysis, and in dyeing. It is decomposed by water giving an antimony oxide and hydrobromic acid. It is corrosive to metals and tissue.

If material involved in fire

- Use dry chemical, carbon dioxide, or dry sand
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Avoid breathing dusts

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash or cement powder
- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

- Add caustic soda
- If dissolved, apply sodium sulfide solution to precipitate heavy metals
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates
- Add soda ash
- Allow to aerate

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Vapor knockdown water is corrosive or toxic and should be diked for containment

ANTIMONY TRICHLORIDE SOLUTION

4932318

CORROSIVE MATERIAL, ACIDIC

UN1733

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Antimony trichloride solution is a colorless liquid with a pungent odor. The solution is antimony trichloride dissolved in hydrochloric acid. The antimony trichloride is decomposed by water to hydrochloric acid and antimony oxychloride with release of heat. (the antimony oxychloride is soluble in hydrochloric acid and insoluble in water). The solution is corrosive to metals and tissue.

If material involved in fire

- Use dry chemical, carbon dioxide, or dry sand
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash or cement powder
- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

- Add caustic soda
- If dissolved, apply sodium sulfide solution to precipitate heavy metals
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates
- Add soda ash
- Allow to aerate

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Vapor knockdown water is corrosive or toxic and should be diked for containment

ANTIMONY TRICHLORIDE, SOLID 4932316
CORROSIVE MATERIAL, ACIDIC UN1733
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Antimony trichloride, solid is a colorless crystalline mass. It is decomposed by water to hydrochloric acid and antimony oxychloride. (Antimony oxychloride is soluble in hydrochloric acid but insoluble in water). It is corrosive to metals and tissue.

If material involved in fire

- Use dry chemical, carbon dioxide, or dry sand
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water
- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

- Add caustic soda
- If dissolved, apply sodium sulfide solution to precipitate heavy metals
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates
- Add soda ash
- Allow to aerate

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Vapor knockdown water is corrosive or toxic and should be diked for containment

ANTIMONY TRIFLUORIDE SOLUTION 4932305
CORROSIVE MATERIAL NA1549
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Antimony trifluoride solution is the white to grey crystalline solid dissolved in water. It is used in ceramics and to make other chemicals. It is corrosive to metals and tissue.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents
- Apply "universal" gelling agent to immobilize spill

Environmental considerations—water spill

- Add caustic soda
- If dissolved, apply sodium sulfide solution to precipitate heavy metals
- Adjust pH to neutral (pH-7)
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Vapor knockdown water is corrosive or toxic and should be diked for containment

ANTIMONY TRIFLUORIDE, SOLID 4932335
CORROSIVE MATERIAL NA1549
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Antimony trifluoride, solid is a white to grey crystalline solid. It is used in ceramics and to make other chemicals. It is corrosive to tissue.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

Add caustic soda

If dissolved, apply sodium sulfide solution to precipitate heavy metals

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Add soda ash

Allow to aerate

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Vapor knockdown water is corrosive or toxic and should be diked for containment

ANTIMONY TRIOXIDE (ANTIMONY OXIDE) 4986905
ORM-E NA9201
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Antimony trioxide is a white crystalline solid. It is used to fireproof fabrics, paper and plastics, as a paint pigment and for many other uses. It is insoluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Keep upwind

Wear boots, protective gloves, and goggles

Avoid breathing vapors or dusts

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Add caustic soda

If dissolved, apply sodium sulfide solution to precipitate heavy metals

Add soda ash

Allow to aerate

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

AQUA AMMONIA SOLUTION (CONTAINING 44% OR LESS AMMONIA) (See AMMONIUM HYDROXIDE 4935280)

ARGON 4904502
NONFLAMMABLE GAS UN1006

Argon is a colorless odorless noncombustible gas. It is heavier than air and can asphyxiate by displacement of air. It may be shipped in cylinders or special tank cars.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Personnel protection

Avoid breathing vapors

Keep upwind

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

ARGON—OXYGEN GAS MIXTURE (COMPRESSED GAS, N.O.S.) 4904410
NONFLAMMABLE GAS UN1956

Argon—oxygen gas mixture is a colorless odorless gas. Both argon and oxygen are noncombustible; however, oxygen can accelerate the burning of a fire. It may only be shipped in cylinders.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Keep sparks, flames, and other sources of ignition away

Attempt to stop leak if without hazard

Personnel protection

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

Approach fire with caution

ARGON PRESSURIZED LIQUID 4904503
NONFLAMMABLE GAS UN1951

Argon pressurized liquid is a colorless noncombustible liquid. Contact with the liquid will cause frostbite. The gas is heavier than air and can asphyxiate by displacement of air. It may only be shipped in cylinders.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water

Do not use water on material itself

Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Do not use water on material itself

Personnel protection

Avoid breathing vapors

Keep upwind

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

ARGON-CARBON DIOXIDE GAS MIXTURE (COMPRESSED GAS, N.O.S.) 4904504
NONFLAMMABLE GAS UN1956

Argon-carbon dioxide gas mixture is a colorless odorless gas. Both argon and carbon dioxide are noncombustible. The mixture can asphyxiate by the displacement of air. It may only be shipped in cylinders.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Personnel protection

Avoid breathing vapors

Keep upwind

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

ARGON-HYDROGEN GAS MIXTURE (COMPRESSED GAS, N.O.S.) 4905805
FLAMMABLE GAS UN1954

Argon-hydrogen gas mixture is a colorless odorless gas. It is easily ignited. It may only be shipped in cylinders. Argon is nonflammable and heavier than air; hydrogen is flammable and lighter than air. A flame may flash back to the source of leak very easily. It may asphyxiate by the displacement of air. Under fire conditions cylinders may violently rupture and rocket.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

Approach fire with caution

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet

If material leaking (not on fire), downwind evacuation must be considered

ARGON-HYDROGEN GAS MIXTURE (COMPRESSED GAS, N.O.S.) 4904505
NONFLAMMABLE GAS UN1956

Argon-hydrogen gas mixture is a colorless odorless gas. Argon is noncombustible whereas hydrogen is a flammable gas. The mixture can separate with the hydrogen rising in the air. The mixture can asphyxiate by the displacement of air. It may only be shipped in cylinders.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Personnel protection

Avoid breathing vapors

Keep upwind

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

ARGON-METHANE GAS MIXTURE (COMPRESSED GAS, N.O.S.) 4905810
FLAMMABLE GAS UN1954

Argon-methane gas mixture is a colorless odorless gas. It is easily ignited and may only be shipped in cylinders. Argon is noncombustible and heavier than air; methane is flammable and lighter than air. A flame can flash back to the source of leak very easily. It may asphyxiate by the displacement of air. Under fire conditions cylinders may violently rupture and rocket.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

Approach fire with caution

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet

If material leaking (not on fire), downwind evacuation must be considered

ARGON-METHANE GAS MIXTURE (COMPRESSED GAS, N.O.S.) 4904506
NONFLAMMABLE GAS UN1956

Argon-methane gas mixture is an odorless colorless gas. Argon is noncombustible; methane is a flammable gas. Argon is heavier than air. Methane is lighter than air. The mixture can separate into its two components. It can asphyxiate by the displacement of air. It may only be shipped in cylinders.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire

(Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Personnel protection

Avoid breathing vapors

Keep upwind

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

ARGON-NITROGEN GAS MIXTURE (COMPRESSED GAS, N.O.S.) 4904507
NONFLAMMABLE GAS UN1956

Argon-nitrogen gas mixture is a colorless odorless gas. Both argon and nitrogen are noncombustible. The mixture can asphyxiate by the displacement of air. It may only be shipped in cylinders.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire

(Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Continued on next page

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment

AROMATIC CONCENTRATES, SUITABLE ONLY FOR FURTHER PROCESSING (COMBUSTIBLE LIQUID, N.O.S.) 4915490**COMBUSTIBLE LIQUID NA1993**

Aromatic concentrates suitable only for further processing are materials having a closed cup flash point between 100 and 199 deg. F. The hazard of these materials is combustibility.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

AROMATIC CONCENTRATES, SUITABLE ONLY FOR FURTHER PROCESSING (FLAMMABLE LIQUID, N.O.S.) 4910490**FLAMMABLE LIQUID UN1993**

Aromatic concentrates suitable only for further processing are materials having a closed cup flash point of less than 100 deg. F. The hazard of these materials is flammability.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ARSENIC ACID SOLUTION (ARSENIC ACID OTHER THAN FUSED) 4923105**POISON B CORROSIVE UN1554**

Arsenic acid solution is a clear colorless liquid. It is soluble in water and non combustible. It is corrosive to metals and is toxic by ingestion.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use foam, carbon dioxide or dry chemical

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

ARSENIC ACID, SOLID (ARSENIC ACID FUSED) 4923106**POISON B, CORROSIVE UN1553**

Arsenic acid, solid is a white crystalline solid. It is soluble in water and non combustible. It is corrosive to metals in the presence of moisture and is toxic by ingestion.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use foam, carbon dioxide or dry chemical

If material not involved in fire

- Keep material out of water sources and sewers
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

ARSENIC BROMIDE, SOLID 4923202**POISON B UN1555**

Arsenic bromide, solid is a yellowish white crystalline solid melting at 90 deg. F. It absorbs moisture from the air. It is decomposed by water to form arsenic acid and hydrobromic acid, a corrosive material. It is toxic by inhalation and ingestion.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors

If material not involved in fire

- Keep material out of water sources and sewers
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

ARSENIC CHLORIDE, LIQUID POISON B

4923203
UN1560

Arsenic chloride is a colorless to yellow oily fuming liquid. It is used to make other arsenic containing compounds. It is decomposed by water to give arsenic acid and hydrochloric acid, a corrosive material. It is irritating to the skin eyes and mucous membranes. It is toxic by inhalation and ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
Do not use water on material itself
If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
Use water spray to absorb vapors

If material not involved in fire

Keep material out of water sources and sewers
Attempt to stop leak if without hazard
Use water spray to knock-down vapors
Do not use water on material itself
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If material leaking (not on fire), downwind evacuation must be considered

ARSENIC DISULFIDE (See ARSENIC SULFIDE 4923208)

ARSENIC IODIDE, SOLID POISON B

4923205
NA1557

Arsenic iodide is an orange-red crystalline solid. It is used in medicine and in chemical analysis. It is decomposed by water to form arsenic acid and hydriodic acid, a corrosive material. It is toxic by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
Do not use water on material itself
If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
Use water spray to absorb vapors

If material not involved in fire

Use water spray to knock-down vapors
Use water spray to knock-down vapors
Do not use water on material itself
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material

Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

ARSENIC PENTOXIDE, SOLID POISON B. CORROSIVE

4923112
UN1559

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Arsenic pentoxide, solid is a white crystalline solid. It is soluble in water to form arsenic acid. It is corrosive to metals in the presence of moisture and is non combustible. It is toxic by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Add ferric chloride (fcl3)
Adjust ph to neutral (ph-7)
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

ARSENIC SULFIDE, SOLID POISON B

4923208
NA1557

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Arsenic sulfide is a yellow or red crystalline solid or powder. It is insoluble in water and it is combustible. It is toxic by inhalation (dust) and by ingestion.

If material on fire or involved in fire

Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

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Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire
fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag
barriers to trap material at bottom
Adjust ph to neutral (ph-7)
Use mechanical dredges or lifts to remove immobilized masses of
pollutants and precipitates

ARSENIC TRICHLORIDE**4923209****POISON B****UN1560****ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)**

Arsenic trichloride is a colorless to yellow oily fuming liquid. It is de-
composed by water to give arsenic acid and hydrochloric acid, a cor-
rosive material. It is irritating to the skin eyes and mucous membranes.
It is toxic by inhalation and ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Do not use water on material itself

If large quantities of combustibles are involved, use water in flooding
quantities as spray and fog

Use water spray to absorb vapors

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Do not use water on material itself

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with
copious amounts of water or soap and water

Evacuation

If material leaking (not on fire), downwind evacuation must be
considered

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or
foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

Adjust ph to neutral (ph-7)

Add calcium hypochlorite

Neutralize with agricultural lime (slaked lime), crushed limestone,
or sodium bicarbonate

Add ferric chloride (feci3)

Adjust ph to neutral (ph-7)

Use mechanical dredges or lifts to remove immobilized masses of
pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Vapor knockdown water is corrosive or toxic and should be diked
for containment

ARSENIC TRIOXIDE, SOLID (ARSENIC, WHITE, SOLID 4923115**ARSENOUS ACID, SOLID)****POISON B, CORROSIVE****UN1561****ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)**

Arsenic trioxide, solid is a white amorphous powder. It is slightly sol-
uble in water and is non combustible. It is corrosive to metals in the
presence of moisture and is toxic by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with
copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involv-
ing this material

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire
fighting water

Environmental considerations—water spill

Add calcium hypochlorite

Neutralize with agricultural lime (slaked lime), crushed limestone,
or sodium bicarbonate

Add ferric chloride (feci3)

Adjust ph to neutral (ph-7)

Use mechanical dredges or lifts to remove immobilized masses of
pollutants and precipitates

ARSENIC TRISULFIDE**4923222****POISON B****NA1557****ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)**

Arsenic trisulfide is a yellow crystalline solid. It is used as a pigment
and for other uses. It is insoluble in water. It is noncombustible.

If material on fire or involved in fire

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with
copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involv-
ing this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire
fighting water

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- Adjust pH to neutral (pH-7)
- Add ferric chloride (FeCl₃)
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

ARSENIC WHITE, SOLID (See ARSENIC TRIOXIDE, SOLID 4923115)**ARSENIC, CRUDE (POISONOUS SOLID, N.O.S.) 4923204
POISON B NA2811**

Arsenic, crude, is a greyish metallic solid. It is insoluble in water. It is toxic by ingestion.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use foam, carbon dioxide or dry chemical

If material not involved in fire

- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

**ARSENIC, SOLID (ARSENIC METALLIC) 4923207
POISON B UN1558**

Arsenic, solid is a greyish metallic solid turning black on the exposure to air. It is insoluble in water. It is toxic by ingestion.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use foam, carbon dioxide or dry chemical

If material not involved in fire

- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

**ARSENICAL COMPOUND, N.O.S. (OR) ARSENICAL 4923210
MIXTURE, N.O.S. LIQUID
POISON B UN1558**

Arsenical compound, n.o.s. or arsenical mixture, n.o.s., liquid are liquid materials or solutions of solid materials containing arsenic. It is toxic by ingestion.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use foam, carbon dioxide or dry chemical

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**ARSENICAL COMPOUND, N.O.S., SOLID, (OR) 4923211
ARSENICAL MIXTURE, N.O.S. SOLID
POISON B UN1557**

Arsenical compound, n.o.s., solid, (or) arsenical mixture, n.o.s. Solid are various colored solid materials containing arsenic. Material generally is not soluble in water. It is toxic by inhalation (dust) and by ingestion.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use foam, carbon dioxide or dry chemical

If material not involved in fire

- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

**ARSENICAL DIP, LIQUID (SHEEP DIP) 4923212
POISON B NA1557**

Arsenical dip, liquid is a solution of an arsenic compound. It is soluble in water and is toxic by ingestion.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use foam, carbon dioxide or dry chemical

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**ARSENICAL DUST
POISON B**

**4923213
UN1562**

Arsenical dust is a greyish colored powder. It is insoluble in water. It is toxic by inhalation (dust) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

**ARSENICAL PESTICIDE, LIQUID, N.O.S.
(COMPOUNDS AND PREPARATIONS)
(INSECTICIDES, OTHER THAN AGRICULTURAL,
NEC)**

4923303

POISON B

UN2759

Arsenical pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The carrier may burn though it may require some effort to ignite. It is toxic by inhalation, skin absorption, and or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

**ARSENICAL ORE, CRUDE (POISONOUS SOLID,
N.O.S.)**

4923395

POISON B

NA2811

Arsenical ore, crude is a variable colored solid.. It is insoluble in water. It is toxic by ingestion.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

**ARSENICAL PESTICIDE, LIQUID, N.O.S.
(COMPOUNDS AND PREPARATIONS)
(INSECTICIDES, OTHER THAN AGRICULTURAL,
NEC)**

4910557

FLAMMABLE LIQUID

UN2760

Arsenical pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The primary hazard of this material is the flammability of the carrier. It has a flash point below 100 deg. F. It can cause illness by inhalation, skin absorption and or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wear self-contained breathing apparatus when fighting fires involving this material

**ARSENICAL PESTICIDE, LIQUID, N.O.S.
(COMPOUNDS AND PREPARATIONS)
(AGRICULTURAL INSECTICIDES, NEC, LIQUID)**

4923301

POISON B

UN2759

Arsenical pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The carrier may burn though it may require some effort to ignite. It is toxic by inhalation, skin absorption, and or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors

Keep upwind

**ARSENICAL PESTICIDE, LIQUID, N.O.S.
(COMPOUNDS AND PREPARATIONS)
(AGRICULTURAL INSECTICIDES, NEC, LIQUID)**

4910558

FLAMMABLE LIQUID

UN2760

Arsenical pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The primary hazard of this material is the flammability of the carrier. It has a flash point below 100 deg. F. It can cause illness by inhalation, skin absorption and or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wear self-contained breathing apparatus when fighting fires involving this material

**ARSENICAL PESTICIDE, SOLID, N.O.S. (COMPOUNDS
AND PREPARATIONS) (INSECTICIDES, OTHER
THAN AGRICULTURAL, NEC)**

4923304

POISON B

UN2759

Arsenical pesticide is a solid or a liquid absorbed on a dry carrier. It is a wettable powder. It is toxic by inhalation, skin absorption, and or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

**ARSENICAL PESTICIDE, SOLID, N.O.S. (COMPOUNDS
AND PREPARATIONS) (AGRICULTURAL
INSECTICIDES, NEC, OTHER THAN LIQUID)**

4923302

POISON B

UN2759

Arsenical pesticide is a solid or a liquid absorbed on a dry carrier. It is a wettable powder. It is toxic by inhalation, skin absorption, and or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

**ARSENOUS ACID, SOLID (See ARSENIC TRIOXIDE,
SOLID 4923115)**

**ARSENOUS AND MERCURIC IODIDE SOLUTION
POISON B**

4923215

NA2810

Arsenous and mercuric iodide solution is arsenous iodide and mercuric iodide dissolved in water and is red or yellow in color. It is toxic by ingestion.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use foam, carbon dioxide or dry chemical

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**ARSINE
POISON A, FLAMMABLE**

4920135

UN2188

Arsine is a colorless gas with a disagreeable garlic-like odor. It is flammable. The gas is heavier than air and a flame can flash back to the source of leak very easily. It is toxic by inhalation. It may only be shipped in cylinders which may have to be overpacked in wooden or metal containers. Prolonged exposure of the cylinders to fire or heat may result in the cylinders violent rupturing and rocketing.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Continued on next page

ing apparatus
e material
ages without protective equipment
hich may have contacted the body with
r or soap and water

fire), downwind evacuation must be

RIPPING (CORROSIVE) 4936543

UN1760
is a various colored liquid. It is corrosive
urn though it may require some effort

d In fire
suitable for type of surrounding fire
urn or burns with difficulty.)
ties as fog
stance as possible
st involved in fire
her sources of ignition away
ources and sewers
s necessary

r material
is, and goggles
ges without protective equipment
hich may have contacted the body with
or soap and water
g apparatus when fighting fires involv-
nticipated, wear full protective clothing

CE SEALER, ASPHALT, 4915302
IM BASE
.O.S.)

NA1993
er, asphalt, coal tar or petroleum base
like odor. It has a flash point between
ly heavier than water and is insoluble
an air.

l in fire
flow can be stopped
ies as fog
ce ineffective
with flooding quantities of water
stance as possible
dry chemical
t involved in fire
er sources of ignition away
ources and sewers
i necessary
wn vapors

s, and goggles
ges without protective equipment
ch may have contacted the body with
or soap and water

ASPHALT PAVEMENT SURFACE SEALER, ASPHALT, 4910302
COAL TAR OR PETROLEUM BASE (FLAMMABLE
LIQUID, N.O.S.)

FLAMMABLE LIQUID UN1993

Asphalt pavement surface sealer, asphalt, coal tar or petroleum base
is a black liquid with a petroleum like odor. It has a flash point of less
than 100 deg. F. It is generally heavier than water and is insoluble in
water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with
copious amounts of water or soap and water

ASPHALT TILE, PLASTICIZER (COMBUSTIBLE 4915408
LIQUID, N.O.S.)

COMBUSTIBLE LIQUID NA1993

Asphalt tile, plasticizer is a material containing a solvent having a
closed cup flash point between 100 and 199 deg. F. The hazard is
combustibility.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with
copious amounts of water or soap and water

ASPHALT TILE, PLASTICIZER (FLAMMABLE LIQUID, 4910408
N.O.S.)

FLAMMABLE LIQUID UN1993

Asphalt tile, plasticizer is a material containing a solvent having a
closed cup flash point of less than 100 deg. F. The hazard is flammability.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

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If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to knock-down vapors
Personnel protection
 Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with
 copious amounts of water or soap and water

**ASPHALT, CUT BACK 4910220
 FLAMMABLE LIQUID NA1999**

Asphalt, cut back is a thick black liquid with a characteristic "tar" odor. It has a flash point of less than 100 deg. F. It is generally heavier than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire
 Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to knock-down vapors

Personnel protection
 Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with
 copious amounts of water or soap and water

**ASPHALT, CUT BACK (ASPHALT PETROLEUM, 4915320
 LIQUID AND TALL OIL PITCH, MIXED
 COMBUSTIBLE LIQUID NA1999**

Asphalt, cut back is a thick black liquid with a characteristic "tar" odor. It has a flash point between 100 and 199 deg. F. It is generally heavier than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire
 Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to knock-down vapors

Personnel protection
 Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with
 copious amounts of water or soap and water

**ASPHALTUM OR COAL TAR PAINT (PAINT) 4915252
 COMBUSTIBLE LIQUID UN1263**

Asphaltum or coal tar paint may contain a combustible solvent. Its flash point is between 100 and 199 deg. F. The hazard is combustibility.

If material on fire or involved in fire
 Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to knock-down vapors

Personnel protection
 Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with
 copious amounts of water or soap and water

**ASPHALTUM OR COAL TAR VARNISH (VARNISH) 4915253
 COMBUSTIBLE LIQUID UN1263**

Asphaltum or coal tar varnish may contain a combustible solvent. Its flash point is between 100 and 199 deg. F. The hazard is combustibility.

If material on fire or involved in fire
 Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to knock-down vapors

Personnel protection
 Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with
 copious amounts of water or soap and water

**AZINPHOS METHYL (OR) GUTHION (AGRICULTURAL 4921526
 INSECTICIDES, NEC, LIQUID)**

**POISON B NA2783
 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)**

Azinphos methyl is a brown waxy solid dissolved in a liquid carrier. It is used as a pesticide. It is a water emulsifiable liquid. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire
 Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

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If material not on fire and not involved in fire
Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

AZINPHOS METHYL (OR) GUTHION (AGRICULTURAL INSECTICIDES, NEC, OTHER THAN LIQUID) 4921527

POISON B NA2783 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Azinphos methyl is a brown waxy solid. It is used as a pesticide. It is a wettable powder. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

AZINPHOS METHYL (OR) GUTHION (INSECTICIDES, OTHER THAN AGRICULTURAL, NEC) 4921528

POISON B NA2783 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Azinphos methyl is a brown waxy solid or the solid dissolved in liquid carrier. It is used as a pesticide. It is toxic by inhalation, skin absorption, and/or ingestion. It is a wettable powder or water emulsifiable liquid. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

AZINPHOS METHYL MIXTURE, LIQUID (OR) GUTHION MIXTURE, LIQUID (AGRICULTURAL INSECTICIDES, NEC, LIQUID) 4921529

POISON B NA2783 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Azinphos methyl mixture, liquid is a brown waxy solid dissolved in a liquid carrier. It is used as a pesticide. It is a water emulsifiable liquid. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

- Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

BAGS, SODIUM NITRATE EMPTY AND UNWASHED 4917301
FLAMMABLE SOLID UN1359

Bags, sodium nitrate, empty and unwashed are burlap bags that have been used to ship sodium nitrate and are still contaminated by it. The bags are easily ignited and burn quite fiercely due to the oxidizing properties of sodium nitrate. The sodium nitrate is soluble in water. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Flood with water

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Avoid breathing fumes from burning material

BARIUM AZIDE, WET (50% OR MORE WATER) 4917110
FLAMMABLE SOLID UN1571

Barium azide, wet is a slurry of white crystals. The dried material is a high explosive. Dry it is easily ignited and burns very vigorously. It is soluble in water. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Dangerously explosive
- Flood with water
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Do not attempt to sweep up dry material

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 5000 feet

BARIUM CHLORATE
OXIDIZER

 4918708
 UN1445

Barium chlorate is a white crystalline solid. It is used in explosives and pyrotechnics, in dyeing textiles, and to make other chlorates. The material is soluble in water. It forms a very flammable mixture with combustible materials and this mixture may be explosive if the combustible material is very finely divided. The mixture can be ignited by friction. Contact with strong sulfuric acid can cause fires or explosions. When mixed with ammonium salts, spontaneous decomposition and ignition may result. Prolonged exposure of the material to fire or heat can result in an explosion.

If material on fire or involved in fire

- Flood with water
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 2500 feet

BARIUM CHLORATE, WET
OXIDIZER

 4918605
 NA1445

Barium chlorate, wet is a water slurry or sludge of white crystals. It is used in explosives and pyrotechnics, in dyeing textiles, and to make other chlorates. The material is soluble in water. It forms a very flammable mixture with combustible materials and this mixture may be explosive if the combustible material is very finely divided. The mixture can be ignited by friction. Contact with strong sulfuric acid can cause fires or explosions. When mixed with ammonium salts, spontaneous decomposition and ignition may result. Prolonged exposure of the material to fire or heat can result in an explosion.

If material on fire or involved in fire

- Flood with water
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 1500 feet

BARIUM CYANIDE, SOLID 4923410
POISON B UN1565
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)

Barium cyanide, solid is a white crystalline solid. It is soluble in water and gradually decomposed by water and very rapidly decomposed by acids to give off hydrogen cyanide, a flammable poison gas. It is toxic by skin absorption through open wounds, by ingestion, and by inhalation of hydrogen cyanide from the decomposition of the material. Toxic oxides of nitrogen are produced in fires involving this material.

Continued on next page

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use foam, carbon dioxide or dry chemical
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors

If material not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Use water spray to knock-down vapors
- Do not use water on material itself

Personnel protection

- Avoid breathing vapors or dusts
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

- If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Add caustic soda
- Add calcium hypochlorite
- Add sodium sulfate (na2so4)
- Adjust ph to neutral (ph-7)
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

BARIUM HYDROXIDE MONOHYDRATE (CORROSIVE SOLID, N.O.S.) 4935238

CORROSIVE MATERIAL UN1780

Barium hydroxide monohydrate is a white powder. It is used in water purification, to make lubricating and oil additives, to make barium containing chemicals and for many other uses. It is slightly soluble in water. It is corrosive to metals and tissue. Tissue.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers

Personnel protection

- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

BARIUM NITRATE OXIDIZER 4918709 UN1448

Barium nitrate is a white crystalline solid. The material is soluble in water. It is non-combustible but it will accelerate the burning of combustible materials. If large quantities of the material are involved in the fire or the combustible material is finely divided an explosion may result. Prolonged exposure of the material to fire or heat may result in an explosion. Toxic oxides of nitrogen are produced in fires involving this material.

If material on fire or involved in fire

- Flood with water
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 2500 feet

BARIUM PERCHLORATE OXIDIZER 4918710 UN1447

Barium perchlorate is a white crystalline solid. It is used to make explosives. It is soluble in water. It is noncombustible but it will accelerate the burning of combustible materials. If large quantities of the material are involved in the fire or the combustible material is finely divided an explosion may result. Prolonged exposure of the material to fire or heat may result in an explosion.

If material on fire or involved in fire

- Flood with water
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

- Approach fire with caution

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 2500 feet

BARIUM PERMANGANATE OXIDIZER 4918711 UN1448

Barium permanganate is a purplish colored crystalline solid. It is used as a disinfectant and to make other permanganates. It is soluble in water. The material itself is noncombustible but it will accelerate the burning of combustible material, if the combustible material is finely divided the mixture may be explosive. Contact with liquid combustible materials may result in spontaneous ignition. Contact with sulfuric acid may result in fires or explosions.

If material on fire or involved in fire

- Flood with water
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 2500 feet

BARIUM PEROXIDE OXIDIZER

4918712
UN1449

Barium peroxide is a greyish white granular solid. It is insoluble in water and is slowly decomposed by water. It is non-combustible but it will accelerate the burning of combustible material. If the combustible material is finely divided the mixture may be explosive. Mixtures of combustible material and the peroxide can be ignited by friction or contact with moisture.

If material on fire or involved in fire

- Flood with water
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 2500 feet

BLASTING CHLORATE (CHLORATE, N.O.S.) OXIDIZER

4918707
UN1461

Blasting chlorate is a crystalline solid. It is soluble in water. It forms a very flammable mixture with combustible materials and this mixture may be explosive if the combustible material is finely divided. The mixture can be ignited by friction. Contact with strong sulfuric acid can cause fires or explosions. When mixed with ammonium salts, spontaneous decomposition and ignition may result. Prolonged exposure to fire or heat can result in an explosion.

If material on fire or involved in fire

- Flood with water
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 2500 feet

BATTERIES, ELECTRIC STORAGE, WET, WITH AUTOMOBILE AUTO PARTS, ENGINE CORROSIVE MATERIAL

4936502

NA2794

Batteries, electric storage, wet, with automobile auto parts engine consist of the wet electric storage battery and mechanic equipment in the same carload or trailer load. There are two possible hazards in transportation. First that the battery may be short circuited and resulting sparks may cause a fire. The second is that the battery may be turned over and the electrolyte spilled. The electrolyte is corrosive to metals and tissue. It is water soluble with evolution of heat.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

BATTERY BOX COMPOUNDS (COMBUSTIBLE LIQUID, N.O.S.)

4915550

COMBUSTIBLE LIQUID

NA1993

Battery box compounds are various colored liquids. They have a flash point between 100 and 199 deg. F. They are generally heavier than water and insoluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

BATTERY BOX COMPOUNDS (FLAMMABLE LIQUID, N.O.S.)

4910550

FLAMMABLE LIQUID

UN1993

Battery box compounds are various colored liquids. They have a flash point of less than 100 deg. F. They are generally heavier than water and insoluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

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If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

BATTERY CHARGER WITH ELECTROLYTE (ACID) 4936567
CORROSIVE MATERIAL, ACIDIC NA2794

Battery charger with electrolyte (acid) consists of a package containing a battery charger and container (s) of electrolyte (acid). The electrolyte is a sulfuric acid-water solution. It is a colorless odorless liquid and is soluble in water with evolution of heat. It is corrosive to metals and tissue.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

BATTERY CHARGER WITH ELECTROLYTE 4936568
(ALKALINE BATTERY FLUID)
CORROSIVE MATERIAL, BASIC NA2794

Battery charger with electrolyte (alkaline battery fluid) consists of a package containing a battery charger and container (s) of electrolyte (alkaline battery fluid). The electrolyte is water solution of potassium or sodium hydroxide. It is a colorless odorless liquid and is soluble in water with release of heat. It is corrosive to metals and tissue.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

BATTERY SETS FOR WET BATTERIES (CORROSIVE 4936503
SOLID, N.O.S.)

CORROSIVE MATERIAL, BASIC UN1759

Battery sets for wet batteries have containers of potassium or sodium hydroxide in the same package with other non-regulated items. Potassium or sodium hydroxide are white solids. They are soluble in water with release of heat. They are corrosive to metals and tissue.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers

Personnel protection

- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

BATTERY SETS IN BATTERY BOXES (CORROSIVE 4936504
SOLID, N.O.S.)

CORROSIVE MATERIAL, BASIC UN1759

Battery sets in battery boxes have containers of potassium or sodium hydroxide in the same package with other non-regulated items. Potassium and sodium hydroxide are white solids. They are soluble in water with release of heat. They are corrosive to metals and tissue.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers

Personnel protection

- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

BATTERY, ELECTRIC STORAGE, WET 4936558
CORROSIVE MATERIAL NA2794

Battery, electric storage, wet is the battery containing either electrolyte (acid) or alkaline corrosive battery fluid. The batteries are continuously evolving hydrogen, a flammable gas. The fluids are soluble in water with evolution of heat. They are corrosive to metals and tissue.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

**BATTERY, ELECTRIC STORAGE, WET, WITH
CONTAINERS OF CORROSIVE BATTERY FLUID
CORROSIVE MATERIAL**

4936557

NA2794

Battery, electric storage, wet, with containers of corrosive battery fluid consist of the batteries packed in the same outside shipping container with battery fluid. The fluid is usually sulfuric acid or sodium potassium hydroxide solutions. The fluid is soluble in water with evolution of heat. It is corrosive to metals and tissues.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

**BAY RUM (COMBUSTIBLE LIQUID, N.O.S.)
COMBUSTIBLE LIQUID**

4915420

NA1993

Bay rum is a clear colorless to variable colored liquid with a pleasant odor. It has a flash point between 100 and 199 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

**BAY RUM (FLAMMABLE LIQUID, N.O.S.)
FLAMMABLE LIQUID**

4910420

UN1993

Bay rum is a clear colorless to variable colored liquid with a pleasant odor. It has a flash point of less than 100 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

**BELT DRESSING (COMBUSTIBLE LIQUID, N.O.S.)
COMBUSTIBLE LIQUID**

4915416

NA1993

Belt dressing is a material containing a solvent having a closed cup flash point between 100 and 199 deg. F. The hazard is combustibility.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

**BELT DRESSING (FLAMMABLE LIQUID, N.O.S.)
FLAMMABLE LIQUID**

4910416

UN1993

Belt dressing is a material containing a solvent having a closed cup flash point of less than 100 deg. F. The hazard is flammability.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

**BENZALDEHYDE
COMBUSTIBLE LIQUID**

4913111

NA1989

Benzaldehyde is a clear colorless to yellowish liquid with an almondlike odor. It has a flash point of 148 deg. F. It is heavier than water and insoluble in water. Its vapors are heavier than air.

Continued on next page

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

BENZENE 4908110
FLAMMABLE LIQUID UN1114
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Benzene is a clear colorless liquid with a characteristic aromatic odor. It is used to make other chemicals, as a solvent, and as a gasoline additive. It has a flash point of 12 deg. F., and solidifies at 42 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

It weighs 7.3 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents
- Apply fluorocarbon-water foam to diminish vapor and fire hazard

Environmental considerations—water spill

- Use natural barriers or oil spill control booms to limit spill motion
- Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material
- Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Remove trapped material with suction hoses

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

BENZENE PHOSPHORUS DICHLORIDE 4931715
CORROSIVE MATERIAL, ACIDIC UN2798

Benzene phosphorus dichloride is a colorless fuming liquid. It is decomposed by water to give hydrochloric acid with release of heat. It is corrosive to metals and tissue.

If material on fire or involved in fire

- Use dry chemical or carbon dioxide
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

BENZENE PHOSPHORUS THIODICHLORIDE 4931720
CORROSIVE MATERIAL, ACIDIC UN2799

Benzene phosphorus thiodichloride is a colorless fuming liquid. It is decomposed by water to give hydrochloric acid with release of heat. It is corrosive to metals and tissue

If material on fire or involved in fire

- Use dry chemical or carbon dioxide
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

**BENZIDINE
POISON B**

**4921503
UN1885**

Benzidine is a greyish yellow to greyish red crystalline solid. It is used to make other chemicals, and in chemical and biological analysis. It is soluble in hot water. It is toxic by ingestion, inhalation, and skin absorption. Toxic oxides of nitrogen are produced during the combustion of this material.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

**BENZINE
FLAMMABLE LIQUID**

**4908112
UN1115**

Benzine is a clear colorless liquid with a petroleum-like odor. It has a flash point of less than 0 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

**BENZOIC ACID
ORM-E
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)**

**4966340
NA9094**

Benzoic acid is a white crystalline solid. It is used to make other chemicals, as a food preservative, and for other uses. It is slightly soluble in water. It will burn though it may take some effort to ignite.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Solid streams of water may be ineffective
Use "alcohol" foam, carbon dioxide or dry chemical
If material not on fire and not involved in fire
Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors or dusts
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**BENZOIC DERIVATIVE PESTICIDE, LIQUID, N.O.S.
(COUMPOUNDS AND PREPARATIONS)
(INSECTICIDES, OTHER THAN AGRICULTURAL, NEC)**

4910507

FLAMMABLE LIQUID

UN2770

Benzoic derivative pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The primary hazard of this material is the flammability of the carrier. It has a flash point below 100 deg. F. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wear self-contained breathing apparatus when fighting fires involving this material

**BENZOIC DERIVATIVE PESTICIDE, LIQUID, N.O.S.
(COUMPOUNDS AND PREPARATIONS)
(AGRICULTURAL INSECTICIDES, NEC, LIQUID)**

4921609

POISON B

UN2789

Benzoic derivative pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The carrier may burn though it may require some effort to ignite. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

Continued on next page

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

BENZOIC DERIVATIVE PESTICIDE, LIQUID, N.O.S. 4910508
(COMPOUNDS AND PREPARATIONS)
(AGRICULTURAL INSECTICIDES, NEC, LIQUID)

FLAMMABLE LIQUID UN2770

Benzoic derivative pesticide is a liquid or solid dissolved in a liquid carrier. The liquid is water emulsifiable. The primary hazard of this material is the flammability of the carrier. It has a flash point below 100 deg. F. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical.

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wear self-contained breathing apparatus when fighting fires involving this material

BENZOIC DERIVATIVE PESTICIDE, SOLID, N.O.S. 4921611
(COMPOUNDS AND PREPARATION)
(AGRICULTURAL INSECTICIDES, NEC, OTHER THAN LIQUID)

POISON B UN2769

Benzoic derivative pesticide is a solid or a liquid absorbed on a dry carrier. It is a wettable powder. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

BENZOIC DERIVATIVE PESTICIDE, SOLID, N.O.S. 4921610
(COMPOUNDS AND PREPARATION)
(INSECTICIDES, NEC, OTHER THAN AGRICULTURAL)

POISON B UN2769

Benzoic derivative pesticide is a solid or a liquid absorbed on a dry carrier. It is a wettable powder. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

BENZOIC DERIVATIVE PESTICIDE, LIQUID, N.O.S. 4921608
(COMPOUNDS AND PREPARATIONS)
(INSECTICIDES, OTHER THAN AGRICULTURAL, NEC)

POISON B UN2769

Benzoic derivative pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The carrier may burn though it may require some effort to ignite. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear full protective clothing
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

BENZOL FORERUNNINGS, CRUDE, NOT BENZOL (FLAMMABLE LIQUID, N.O.S.) 4910204 FLAMMABLE LIQUID UN1993

Benzol forerunnings, crude, not benzol are clear colorless liquids with a petroleum like odor. They have a flash point of less than 100 deg. F. They are lighter than water and insoluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may spread fire
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

BENZONITRILE 4913134 COMBUSTIBLE LIQUID UN2224 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Benzonitrile is a clear colorless liquid having an almond-like odor. It is used as a specialty solvent, and to make other chemicals. It has a flash point of 161 deg. F. It is heavier than water and slightly soluble in water.

It weighs 8.4 pounds per gallon.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 If contact with the material anticipated, wear full protective clothing

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
 If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
 Absorb bulk liquid with fly ash or cement powder
 Neutralize with caustic soda or soda ash

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
 Add caustic soda
 If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors
 Combustion products include corrosive or toxic vapors

BENZOYL CHLORIDE 4931725 CORROSIVE MATERIAL, ACIDIC, COMBUSTIBLE UN1736 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Benzoyl chloride is a colorless fuming liquid having a pungent odor. It is used in medicine, and in the manufacture of other chemicals. It is combustible and has a flash point of 162 deg. F. Its fumes are irritating to the eyes and mucous membranes. It is decomposed by water to hydrochloric acid and water insoluble benzoic acid with release of heat. It is corrosive to metals and tissue.

It weighs 10.2 pounds per gallon.

If material on fire or involved in fire

Use dry chemical or carbon dioxide
 Do not use water on material itself
 If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
 Use water spray to absorb vapors
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to knock-down vapors
 Do not use water on material itself
 Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 If contact with the material anticipated, wear full protective clothing

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Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
Absorb bulk liquid with fly ash or cement powder
Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

BENZOYL PEROXIDE (BENZOYL PEROXIDE CRYSTALS, GRANULES OR POWDERS, WET WITH NOT LESS THAN 30% WATER) 4919115**ORGANIC PEROXIDE NA2085**

Benzoyl peroxide is a white granular solid. It is easily ignited and burns very rapidly. It strongly supports the burning of combustible materials. Contact with many materials may result in ignition. Under prolonged exposure to fire or heat, containers of the peroxide can explode. As the peroxide dries out it becomes more susceptible to ignition and decomposition.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

BENZOYL PEROXIDE (BENZOYL PEROXIDE, DRY OR WET WITH LESS THAN 30% WATER) 4919110**ORGANIC PEROXIDE NA2085**

Benzoyl peroxide is a white granular solid. It is easily ignited and burns very rapidly. It strongly supports the burning of combustible materials. Contact with many materials may result in ignition. Under prolonged exposure to fire or heat containers of the peroxide can explode. As the peroxide dries out it becomes more susceptible to ignition and decomposition.

If material on fire or involved in fire

Burns with explosive violence. If it becomes ignited, it cannot be extinguished
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

BENZOYL PEROXIDE, (MORE THAN 77% BUT LESS THAN 95% WITH WATER) 4919118**ORGANIC PEROXIDE UN2082**

Benzoyl peroxide, (more than 77% but less than 95% with water) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

BENZOYL PEROXIDE. (NOT LESS THAN 30% BUT NOT MORE 52% WITH INERT SOLID) 4919117

ORGANIC PEROXIDE UN2089

Benzoyl peroxide, (not less than 30% but not more 52% with inert solid) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

BENZOYL PEROXIDE. (NOT MORE THAN 72% AS A PASTE) 4919116

ORGANIC PEROXIDE UN2087

Benzoyl peroxide, (not more than 72% as a paste) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

BENZOYL PEROXIDE. (NOT MORE THAN 77% WITH WATER) 4919114

ORGANIC PEROXIDE UN2090

Benzoyl peroxide, (not more than 77% with water) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

BENZOYL PEROXIDE, (TECHNICALLY PURE OR) 4919113
BENZOYL PEROXIDE, (MORE THAN 52% WITH INERT SOLID)

ORGANIC PEROXIDE UN2085

Benzoyl peroxide, (technically pure or) benzoyl peroxide, (more than 52% with inert solid) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

Continued on next page

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

BENZYL BROMIDE (BROMOTOLUENE, ALPHA) 4936010
CORROSIVE MATERIAL, POISONOUS UN1737

Benzyl bromide is a colorless liquid with an agreeable odor. It is toxic by inhalation and by skin absorption. It is slightly soluble in water and is heavier than water. It is corrosive to metals and tissue.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

BENZYL CHLORIDE 4936012
CORROSIVE MATERIAL, POISONOUS, COMBUSTIBLE UN1738
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Benzyl chloride is a colorless liquid with an irritating odor. It is toxic by inhalation and skin absorption. It is combustible and has a flash point of 153 deg. F. It is slightly soluble in water. It is corrosive to metals and tissue.

It weighs 9.2 pounds per gallon.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Apply "universal" gelling agent to immobilize spill

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- Remove trapped material with suction hoses
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Vapor knockdown water is corrosive or toxic and should be diked for containment

BENZYL CHLOROFORMATE 4933010
CORROSIVE MATERIAL, ACIDIC, POISONOUS UN1739

Benzyl chloroformate is a colorless liquid with an acrid odor. It is decomposed by water to give hydrochloric acid with evolution of heat. Its vapors are irritating to eyes and mucous membranes. It is corrosive to metals and tissue.

If material on fire or involved in fire

- Use dry chemical, carbon dioxide, or dry sand
 - Do not use water on material itself
 - If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
 - Use water spray to absorb vapors
 - Cool all affected containers with flooding quantities of water
 - Apply water from as far a distance as possible
- If material not on fire and not involved in fire**
- Keep sparks, flames, and other sources of ignition away
 - Keep material out of water sources and sewers
 - Build dikes to contain flow as necessary
 - Use water spray to knock-down vapors
 - Do not use water on material itself
 - Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

BERYLLIUM CHLORIDE 4923305
POISON B UN1568
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Beryllium chloride is a white to yellow crystalline mass. It absorbs water from the air and dissolves in it. It is toxic by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Adjust pH to neutral (pH-7)
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

BERYLLIUM COMPOUND, N.O.S.

4923216

POISON B

UN1566

Beryllium compounds, n.o.s. are generally white crystalline or powdered material containing beryllium. They are generally soluble in water. They are toxic by inhalation and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

BERYLLIUM FLUORIDE

4923310

POISON B

NA1566

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Beryllium fluoride is a colorless crystalline mass. It is soluble in water. It is toxic by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Adjust pH to neutral (pH-7)
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

BERYLLIUM HYDROXIDE (BERYLLIUM COMPOUND, N.O.S.)

4923315

POISON B

UN1566

Beryllium hydroxide is a white powder. It is insoluble in water. It is toxic by inhalation (dust, etc.) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

**BERYLLIUM NITRATE
OXIDIZER**

4918759

UN2464

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Beryllium nitrate is a white to pale yellow crystalline solid. It is used in chemical analysis. It is soluble in water. It is noncombustible, but it will accelerate the burning of combustible materials. If large quantities of the material are involved or the material is finely divided, an explosion may result. Prolonged exposure to fire or heat may result in an explosion. Toxic oxides of nitrogen are produced in fires involving this material.

If material involved in fire

Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep material out of water sources and sewers

Personnel protection

Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Continued on next page

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Adjust pH to neutral (pH-7)
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

BERYLLIUM PHOSPHATE (BERYLLIUM COMPOUND, N.O.S.) 4923325**POISON B UN1566**

Beryllium phosphate is a white crystalline powder. It is insoluble in water. It is toxic by inhalation (dust, etc.) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

BERYLLIUM SULFATE (BERYLLIUM COMPOUND, N.O.S.) 4923330**POISON B UN1566**

Beryllium sulfate is a colorless crystalline solid. It is soluble in water. It is toxic by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

BETA-PROPIOLACTONE (COMBUSTIBLE LIQUID, N.O.S.) 4913110**COMBUSTIBLE LIQUID NA1993**

Beta-propiolactone is a clear colorless liquid with a pungent odor. It has a flash point of 167 deg. F. It is heavier than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

BIPHENYL (DIPHENYL) (COMBUSTIBLE LIQUID, N.O.S.) 4913108**COMBUSTIBLE LIQUID NA1993**

Biphenyl is a clear colorless liquid with a pleasant odor. It is used to manufacture other chemicals and as a fungicide. It has a flash point of 180 deg. F. and is insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may spread fire

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

BIPYRIDILUM PESTICIDE, LIQUID, N.O.S. 4910521
(COMPOUNDS AND PREPARATIONS)
(INSECTICIDES, OTHER THAN AGRICULTURAL, NEC)**FLAMMABLE LIQUID UN2782**

Bipyridilum pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The primary hazard of this material is the flammability of the carrier. It has a flash point below 100 deg. F. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

BIPYRIDILUM PESTICIDE, LIQUID, N.O.S. 4921615
(COMPOUNDS AND PREPARATIONS)
(INSECTICIDES, OTHER THAN AGRICULTURAL,
NEC)

POISON B UN2781

Bipyridilum pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The carrier may burn though it may require some effort to ignite. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

BLACK POWDER 4901710
CLASS A EXPLOSIVE

Black powder is a black granular solid consisting of charcoal potassium nitrate and sulfur. It is easily ignited and once ignited burns very rapidly. Under prolonged exposure to fire or heat containers of the material can explode.

If material on fire or involved in fire

- Dangerously explosive
- Do not fight fires in a cargo of explosives
- Evacuate area and let burn

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep spilled material wet
- Wet spilled material before picking it up
- Do not attempt to sweep up dry material

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear protective gloves and safety glasses
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 5000 feet

BLACK POWDER IGNITER WITH EMPTY CARTRIDGE 4903110
BAG
CLASS C EXPLOSIVE

Black powder igniter with empty cartridge bag consists of empty cartridge bags with an igniter composed of black powder attached to it.

If material on fire or involved in fire

- Dangerously explosive
- Flood with water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Approach fire with caution
- Avoid breathing dusts, and fumes from burning material
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 1500 feet

BLASTING AGENT, N.O.S. 4902915
BLASTING AGENT

Blasting agent, N.O.S. is the proper shipping name for those materials used for blasting that can not be detonated with an electric blasting cap, and will not explode when subject to friction, or impact; or when the largest single package is subject to fire. However if large quantities of this material are involved in a fire, it may explode.

If material on fire or involved in fire

- Low order explosive potential
- Do not fight fires in a cargo of blasting agents
- Evacuate area and let burn

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep spilled material wet
- Wet spilled material before picking it up
- Do not attempt to sweep up dry material

Personnel Protection

- Avoid breathing dusts, and fumes from burning material
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

BOILER COMPOUNDS, LIQUID 4936505
CORROSIVE MATERIAL NA1760

Boiler compounds, liquid are various colored liquids. They are water soluble and are corrosive to metals and/or tissue.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

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Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wear self-contained breathing apparatus when fighting fires involving this material

BIPYRIDILUM PESTICIDE, LIQUID, N.O.S. 4910522
(COMPOUNDS AND PREPARATIONS)
(AGRICULTURAL INSECTICIDES, NEC, LIQUID)

FLAMMABLE LIQUID UN2782

Bipyridilum pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The primary hazard of this material is the flammability of the carrier. It has a flash point below 100 deg. F. It can cause illness by inhalation, skin absorption and or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wear self-contained breathing apparatus when fighting fires involving this material

BIPYRIDILUM PESTICIDE, SOLID, N.O.S. 4921618
(COMPOUNDS AND PREPARATIONS)
(AGRICULTURAL INSECTICIDES, NEC, OTHER THAN LIQUID)

POISON B UN2781

Bipyridilum pesticide is a solid or a liquid absorbed on a dry carrier. It is a wettable powder. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

BIPYRIDILUM PESTICIDE, SOLID, N.O.S. 4921617
(COMPOUNDS AND PREPARATIONS)
(INSECTICIDES, OTHER THAN AGRICULTURAL, NEC)

POISON B UN2781

Bipyridilum pesticide is a solid or a liquid absorbed on a dry carrier. The carrier is water emulsifiable. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

BIPYRIDILUM PESTICIDE, LIQUID, N.O.S. 4921616
(COMPOUNDS AND PREPARATIONS)
(AGRICULTURAL INSECTICIDES, NEC, LIQUID)

POISON B UN2781

Bipyridilum pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The carrier may burn though it may require some effort to ignite. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

BOND BREAKING COMPOUND, CONSISTING OF NAPHTHA PETROLEUM RESINS AND VEGETABLE OIL (COMBUSTIBLE LIQUID, N.O.S.) 4915144

COMBUSTIBLE LIQUID NA1993
Bond breaking compound is a various colored liquid. It has a flash point between 100 and 200 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

BOND BREAKING COMPOUND, CONSISTING OF NAPHTHA, PETROLEUM RESINS AND VEGETABLE OILS (FLAMMABLE LIQUID, N.O.S.) 4910145

FLAMMABLE LIQUID UN1993
Bond breaking compound is a various colored liquid. It has a flash point of less than 100 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

BOOSTER (EXPLOSIVE) (COMMERCIAL) 4901310
CLASS A EXPLOSIVE

Booster (explosive) consists of a casing containing a high explosive. It is used to intensify the explosion of a detonator

If material on fire or involved in fire

- Dangerously explosive
- Do not fight fires in a cargo of explosives
- Evacuate area and let burn

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 5000 feet

BOOSTER, (EXPLOSIVE)(MILITARY) 4901215
CLASS A EXPLOSIVE

Booster (explosive) consists of a casing containing a high explosive. It is used to intensify the explosion of a detonator or detonating fuze. If the casing is metal the booster will explode under fire conditions. If the casing is nonmetallic the booster may or may not explode under fire conditions.

If material on fire or involved in fire

- Dangerously explosive
- Do not fight fires in a cargo of explosives
- Evacuate area and let burn

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 5000 feet

BORDEAU ARSENITE, LIQUID 4923420
POISON B NA2759

Bordeau arsenite, liquid is arsenic and copper compounds. They are dark in color and are used as an insecticide. They are toxic by ingestion and inhalation.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use foam, carbon dioxide or dry chemical

If material not involved in fire

- Keep material out of water sources and sewers

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Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

BORDEAUX ARSENITE, SOLID POISON B

4923415
NA2759

Bordeaux arsenite, solid is an arsenic and copper compound. It is a black crystalline solid, and is used as an insecticide. It is toxic by ingestion and by inhalation (dusts, etc). It is generally soluble in water.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use foam, carbon dioxide or dry chemical

If material not involved in fire

- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

BORON TRIBROMIDE CORROSIVE MATERIAL, ACIDIC, POISONOUS

4932010
UN2692

Boron tribromide is a colorless, fuming liquid with a pungent odor. Its fumes are irritating to the eyes and mucous membranes. It is decomposed by water to hydrobromic and boric acids with release of heat. It is corrosive to metals and tissue.

If material involved in fire

- Use dry chemical, carbon dioxide, or dry sand
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

BORON TRICHLORIDE CORROSIVE MATERIAL, POISONOUS, ACIDIC

4932011
UN1741

Boron trichloride is a colorless fuming liquid with a pungent odor. It is used as a catalyst in chemical manufacture, in soldering fluxes, and for many other uses. Its fumes are irritating to the eyes and mucous membranes. It is decomposed by water to boric and hydrochloric acids with release of heat. It is corrosive to metals and tissue.

If material involved in fire

- Use dry chemical, carbon dioxide, or dry sand
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

BORON TRIFLUORIDE NONFLAMMABLE GAS, POISONOUS

4904110
UN1008

Boron trifluoride is a colorless gas with a pungent odor. It is toxic by inhalation. It is soluble in water and slowly hydrolyzed by cold water to give hydrofluoric acid, a corrosive material. Its vapors are heavier than air. It may only be shipped in cylinders.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors

If material not involved in fire

- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors
- Do not use water on material itself

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If material leaking (not on fire), downwind evacuation must be considered

BORON TRIFLUORIDE-ACETIC ACID COMPLEX 4930202
CORROSIVE MATERIAL, ACIDIC UN1742

Boron trifluoride-acetic acid complex is a colorless liquid with a penetrating odor. It is soluble in water. It is corrosive to metals and tissue.

If material on fire or involved in fire

- Do not use water on material itself
- Use "alcohol" foam, carbon dioxide or dry chemical
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

BOX TOE GUM 4910109
FLAMMABLE LIQUID UN2059

Box toe gum is the solution of a gum in a flammable solvent. It has a flash point of less than 100 deg. F.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

BOX TOE GUM 4915109
COMBUSTIBLE LIQUID UN2050

Box toe gum is the solution of a gum in a flammable solvent. It has a flash point between 100 and 199 deg. F.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

- If material not on fire and not involved in fire**
- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

BRAKE OR SHOCK ABSORBER FLUID OR 4915543
HYDRAULIC SYSTEM FLUID OTHER THAN
PETROLEUM (COMBUSTIBLE LIQUID, N.O.S.) NA1993
COMBUSTIBLE LIQUID

Brake or shock absorber fluid or hydraulic system fluid other than petroleum is a various colored liquid. It has a flash point of between 100 and 200 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

BRANDY, ALCOHOLIC (ALCOHOLIC BEVERAGE) 4910107
FLAMMABLE LIQUID UN1170

Brandy, alcoholic is clear colorless to variable colored liquid with a characteristic odor. It has a flash point of less than 100 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Continued on next page

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

BRANDY, ALCOHOLIC (ALCOHOLIC BEVERAGE) 4915107 COMBUSTIBLE LIQUID UN1170

Brandy, alcoholic is clear colorless to variable colored liquid with a characteristic odor. It has a flash point between 100 and 199 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

BROMBENZYL CYANIDE, LIQUID (IRRITATING 4925210 AGENT, N.O.S.) IRRITATING MATERIAL NA1693

Brombenzyl cyanide is a pale yellow crystalline solid melting at 77 deg. F. to a brown oily liquid. The vapors are extremely irritating to the eyes and mucous membranes. Exposure to high concentrations may be fatal. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Use "alcohol" foam, carbon dioxide or dry chemical
- Cool all affected containers with flooding quantities of water
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

BROMINE 4936110 CORROSIVE MATERIAL, POISONOUS, OXIDIZING UN1744

Bromine is a reddish brown fuming liquid with a pungent odor. Its vapors are irritating to the eyes and mucous membranes. It is toxic by inhalation. It is heavier than water and slightly soluble in water. It accelerates the burning of combustible material. It is corrosive to metals and tissue.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use water spray to absorb vapors

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If material leaking (not on fire) evacuate for a radius of 2500 feet

BROMINE PENTAFLUORIDE 4918505 OXIDIZER, CORROSIVE UN1747

Bromine pentafluoride is a colorless fuming liquid with a pungent odor. It is used to make other chemicals and in rockets. It is decomposed by water to hydrofluoric acid and other materials with release of heat. Its vapors are irritating to the eyes and mucous membranes. It is corrosive to metals and tissue. It will accelerate the burning of combustible material. It may only be shipped in cylinders without any safety relief device. If cylinders are involved in fire they may violently rupture and rocket.

If material involved in fire

- Do not use water on material itself
- Use dry chemical or carbon dioxide
- Cool all affected containers with flooding quantities of water
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors

If material not involved in fire

- Do not use water on material itself
- Keep material out of water sources and sewers
- Use water spray to knock-down vapors
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

**BROMINE TRIFLUORIDE
OXIDIZER, CORROSIVE**

**4918507
UN1746**

Bromine trifluoride is a colorless to yellow fuming liquid with a pungent odor. It solidifies at 48 deg. F. It is decomposed by water to hydrofluoric acid and other materials with release of heat. It is corrosive to metals and tissue. It will accelerate the burning of combustible material. It may only be shipped in cylinder without any safety relief device. If the cylinders are involved in fire they may violently rupture and rocket.

If material involved in fire

- Do not use water on material itself
- Use dry chemical or carbon dioxide
- Cool all affected containers with flooding quantities of water
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors

If material not involved in fire

- Do not use water on material itself
- Keep material out of water sources and sewers
- Use water spray to knock-down vapors
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

**BROMOACETIC ACID SOLUTION
CORROSIVE MATERIAL, ACIDIC**

**4931411
UN1938**

Bromoacetic acid solution is the colorless crystalline material dissolved in water. It is corrosive to metals and tissue.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

**BROMOACETIC ACID, SOLID
CORROSIVE MATERIAL**

**4931410
UN1938**

Bromoacetic acid, solid is a colorless crystalline material. It absorbs moisture from the air and forms a syrup. It is soluble in water. It is corrosive to metals and tissue.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

**BROMOACETONE, LIQUID
POISON A, FLAMMABLE**

**4920101
UN1569**

Bromoacetone is a clear colorless liquid turning violet in the absence of air and further decomposing to a black resinous mass on long standing. In low concentrations it is very irritating to the eyes and in higher concentrations or prolonged exposure to low concentration it is toxic by inhalation. Contact with the liquid will cause very painful burns. The material may only be shipped in cylinders or bottles or cans packed in wooden boxes. The material will burn. Prolonged exposure of the cylinders to heat or fire may result in the violent rupturing and rocketing of the cylinders.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If material leaking (not on fire), downwind evacuation must be considered

**BROMOBENZENE
COMBUSTIBLE LIQUID**

**4913112
UN2514**

Bromobenzene is a clear colorless liquid with a pleasant odor. It has a flash point of 124 deg. F. It is heavier than water and insoluble in water. Its vapors are heavier than air.

Continued on next page

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

**BRUCINE, SOLID (DIMETHYL STRYCHNINE)
POISON B****4921411
UN1570**

Brucine, solid is a white crystalline solid. It is very slightly soluble in water. It is combustible though it may require some effort to ignite. It is toxic by inhalation (vapor, dust, etc.)

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing vapors or dusts
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**BURNT COTTON, NOT REPIKED (COTTON, NEC, IN
BALES COMPRESSED)****4917304****FLAMMABLE SOLID****NA1325**

Burnt cotton, not repicked is cotton fibre that has been on fire and the burned portion has not been removed. The hazard is that once cotton has been on fire, the fire may persist in the interior of the bale for a long time. The regulations require that burnt cotton be held for ten days after the last evidence of fire, before it is offered for transportation.

If material on fire or involved in fire

- Flood with water

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

**BURSTER (EXPLOSIVE)
CLASS A EXPLOSIVE****4901220**

Burster (explosive) consists of a casing containing a high explosive. It is used to rupture a bomb or projectile to release the contents. Under fire conditions they will explode.

If material on fire or involved in fire

- Dangerously explosive
- Do not fight fires in a cargo of explosives
- Evacuate area and let burn

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 5000 feet

**BUTADIENE, INHIBITED (BUTADIENE FROM
ALCOHOL)****4905705****FLAMMABLE GAS****UN1010**

Butadiene, inhibited is a colorless gas with an aromatic odor. It is used to make synthetic rubber and plastics, and to make other chemicals. It is shipped as a liquefied gas under its vapor pressure. Contact with the liquid can cause frostbite. It must be shipped inhibited as it is liable to polymerization. If polymerization were to take place in a cylinder or tank car, the cylinder or tank car may violently rupture. It is easily ignited. Its vapor is heavier than air and a flame can flash back to the source of leak very easily. It can asphyxiate by the displacement of air. Under fire conditions the cylinders or tank cars may violently rupture and rocket.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
- If material leaking (not on fire), downwind evacuation must be considered

**BUTADIENE, INHIBITED (BUTADIENE FROM
PETROLEUM)****4905704****FLAMMABLE GAS****UN1010**

Butadiene, inhibited is a colorless gas with an aromatic odor. It is used to make synthetic rubber and plastics, and to make other chemicals. It is shipped as a liquefied gas under its vapor pressure. Contact with the liquid can cause frostbite. It must be shipped inhibited as butadiene is liable to polymerization. If polymerization occurs in a cylinder or tank car, the cylinder or tank car may violently rupture. It is easily ignited. Its vapors are heavier than air and a flame can flash back to the source of leak very easily. It can asphyxiate by the displacement of air. Under fire conditions the cylinders or tank cars may violently rupture and rocket.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear protective gloves and goggles
Do not handle broken packages without protective equipment
Approach fire with caution

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
If material leaking (not on fire), downwind evacuation must be considered

BUTADIENE, INHIBITED (BUTADIENE, IMPURE, FOR FURTHER REFINING) 4905703

FLAMMABLE GAS UN1010

Butadiene, inhibited is a colorless gas with an aromatic odor. It is shipped as a liquefied gas under its vapor pressure. Contact with the liquid can cause frostbite. It must be shipped inhibited as butadiene is liable to polymerization. If polymerization were to take place in a cylinder or tank car, the cylinder or tank car may violently rupture. It is easily ignited. Its vapor is heavier than air and a flame can flash back to the source of leak very easily. It can asphyxiate by the displacement of air. Under fire conditions the cylinders or tank cars may violently rupture and rocket.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear protective gloves and goggles
Do not handle broken packages without protective equipment
Approach fire with caution

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
If material leaking (not on fire), downwind evacuation must be considered

BUTANE 4905706
FLAMMABLE GAS UN1075

Butane is a colorless gas with a faint petroleum like odor. It is used as a fuel, an aerosol propellant, in cigarette lighters, and to make other chemicals. For transportation it may be stencched. It is shipped as a liquefied gas under its vapor pressure. Contact with the liquid can cause frostbite. It is easily ignited. Its vapors are heavier than air and a flame can flash back to the source of leak very easily. The leak can be either a liquid or vapor leak. Under fire conditions the cylinders or tank cars may violently rupture and rocket.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear protective gloves and goggles
Do not handle broken packages without protective equipment
Approach fire with caution

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
If material leaking (not on fire), downwind evacuation must be considered

BUTANE (BUTANE, IMPURE, FOR FURTHER REFINING) 4905702

FLAMMABLE GAS UN1075

Butane is a colorless gas with a faint petroleum like odor. It is shipped as a liquefied gas under its vapor pressure. Contact with the liquid can cause frostbite. It is easily ignited. Its vapors are heavier than air and a flame can flash back to the source of leak very easily. The leak can be either a liquid or vapor leak. Under fire conditions the cylinders or tank cars may violently rupture and rocket.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear protective gloves and goggles
Do not handle broken packages without protective equipment
Approach fire with caution

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
If material leaking (not on fire), downwind evacuation must be considered

2-BUTANOL (BUTYL ALCOHOL) 4909129
FLAMMABLE LIQUID NA1120

2-Butanol is a clear, colorless liquid with a pleasant odor. It is used to make other chemicals and as a solvent. It has a flash point of 75 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

Continued on next page

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

BUTENE GAS, LIQUEFIED (LIQUEFIED PETROLEUM GAS) 4905707**FLAMMABLE GAS UN1075**

Butene gas, liquefied is colorless gas with a faint petroleum like odor. For transportation it may be stenciled. It is shipped as a liquefied gas under its own vapor pressure. Contact with the liquid can cause frostbite. It is easily ignited. Its vapor is heavier than air, and a flame can flash back to the source of the leak very easily. The leak can either be a liquid or vapor leak. It can asphyxiate by the displacement of air. Under fire conditions the cylinders or tank cars may violently rupture and rocket.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
- If material leaking (not on fire), downwind evacuation must be considered

**BUTYL ACETATE 4909128
FLAMMABLE LIQUID UN1123
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)**

Butyl acetate is a clear, colorless liquid with a fruity odor. It has a flash point in the range of 72 deg. F. to 88 deg. F. It is lighter than water and very slightly soluble in water. Its vapors are heavier than air.

It weighs 7.4 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire

- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Apply fluorocarbon-water foam to diminish vapor and fire hazard

Environmental considerations—water spill

- Use natural barriers or oil spill control booms to limit spill motion
- Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material
- Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Remove trapped material with suction hoses

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

**N-BUTYL ACID PHOSPHATE 4933315
CORROSIVE MATERIAL, ACIDIC UN1718**

N-Butyl acid phosphate is a colorless liquid. It is insoluble in water. It is corrosive to metals and tissue.

If material on fire or involved in fire

- Use dry chemical, carbon dioxide, or dry sand
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog

Use water spray to absorb vapors

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

BUTYL ACRYLATE (COMBUSTIBLE LIQUID, N.O.S.) 4912215
COMBUSTIBLE LIQUID NA1993

Butyl acrylate is a clear colorless liquid. It is used to make paints and plastics. It has a flash point of 120 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet

N-BUTYL ALCOHOL (BUTYL ALCOHOL) 4909117
FLAMMABLE LIQUID NA1120

N-butyl alcohol is a clear colorless liquid. It is used to make other chemicals. It has a flash point of 95 deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

TERT-BUTYL ALCOHOL (BUTYL ALCOHOL) 4909130
FLAMMABLE LIQUID NA1120

Tert-butyl alcohol is a clear, colorless liquid with a camphor like odor. It has a flash point of 52 deg. F. and a melting point of 77 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

BUTYL BROMIDE (NORMAL) 4909127
FLAMMABLE LIQUID UN1126

Butyl bromide (normal) is a clear colorless liquid. It has a flash point of 65 deg. F. It is heavier than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

BUTYL CHLORIDE 4908115
FLAMMABLE LIQUID UN1127

Butyl chloride is a clear colorless liquid. It has a flash point of 15 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

Continued on next page

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

**BUTYL ETHER
FLAMMABLE LIQUID****4909125
UN1149**

Butyl ether is a clear colorless with an ethereal odor. It has a flash point of 77 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**BUTYL FORMATE
FLAMMABLE LIQUID****4909126
UN1128**

Butyl formate is a clear colorless liquid. It has a flash point of 77 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**TERT-BUTYL HYDROPEROXIDE, (MORE THAN 72%
BUT NOT MORE THAN 90% WITH WATER)
ORGANIC PEROXIDE****4919136
UN2094**

Tert-butyl hydroperoxide, (more than 72% but not more than 90% with water) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is soluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

**TERT-BUTYL CUMYL PEROXIDE, (TECHNICALLY
PURE OR) TERT-BUTYL CUMENE PEROXIDE,
(TECHNICALLY PURE)****4919135****ORGANIC PEROXIDE****UN2091**

Tert-butyl cumyl peroxide, (technically pure or) tert-butyl cumene peroxide, (technically pure) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

If material on fire or involved in fire

Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical
 Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Keep spilled material wet
 Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 Wear self-contained breathing apparatus when fighting fires involving this material
 If contact with the material anticipated, wear full protective clothing
 Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

TERT-BUTYL HYDROPEROXIDE, (NOT MORE THAN 72% WITH WATER)

4919137

ORGANIC PEROXIDE

UN2093

Tert-butyl hydroperoxide, (not more than 72% with water) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is soluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical
 Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Keep spilled material wet
 Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 Wear self-contained breathing apparatus when fighting fires involving this material
 If contact with the material anticipated, wear full protective clothing
 Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

TERT-BUTYL HYDROPEROXIDE, (NOT MORE THAN 80% IN DI-TERT-BUTYL PEROXIDE AND SOLVENT)

4919138

ORGANIC PEROXIDE

UN2092

Tert-butyl hydroperoxide, (not more than 80% in di-tert-butyl peroxide and solvent) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is soluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical
 Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Keep spilled material wet
 Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 Wear self-contained breathing apparatus when fighting fires involving this material
 If contact with the material anticipated, wear full protective clothing
 Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**N-BUTYL ISOCYANATE
 FLAMMABLE LIQUID, POISONOUS**

4907415

UN2485

N-butyl isocyanate is a clear colorless liquid. It has a flash point of 70 deg. F. In low concentrations its vapors are irritating to the eyes and mucous membranes. In higher concentrations it is toxic by inhalation. It is lighter than water and insoluble in water. It is very slowly decomposed by water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may spread fire
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to knock-down vapors

Continued on next page

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 If contact with the material anticipated, wear full protective clothing

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
 If material leaking (not on fire), downwind evacuation must be considered

**TERT-BUTYL ISOPROPYL BENZENE
 HYDROPEROXIDE
 ORGANIC PEROXIDE**

4919590

NA2091

Tertiary butyl isopropyl benzene hydroperoxide is a white crystalline solid. It must be shipped as a solution in a non-volatile solvent of not more than 60% concentration. At times this may appear as a slurry or sludge of white crystals. The solution may take some effort to ignite but once ignited, it burns with increasing rapidity as the fire progresses. The dried material is more easily ignited. Contamination of the solution with many chemicals can cause a violent chemical reaction. The material supports the burning of combustible material. Under prolonged exposure to heat or fire containers of the material can explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical
 Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 Wear self-contained breathing apparatus when fighting fires involving this material
 If contact with the material anticipated, wear full protective clothing
 Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**BUTYL LACTATE (COMBUSTIBLE LIQUID, N.O.S.)
 COMBUSTIBLE LIQUID**

4913131

NA1993

Butyl lactate is a clear colorless liquid with a mild odor. It is used as a solvent, and in the making of other chemicals. It has a flash point of 168 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

**BUTYL MERCAPTAN
 FLAMMABLE LIQUID**

4909133

UN2347

Butyl mercaptan is a clear, colorless liquid with a strong skunk-like odor. It has a flash point in the range of -15 deg. F. to 35 deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may spread fire
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 Wear self-contained breathing apparatus when fighting fires involving this material

**TERT-BUTYL PEROXY-2-ETHYLHEXANOATE, (NOT
 MORE THAN 30%) WITH 2,2-DI-(TERT-
 BUTYLPEROXY) BUTANE, (NOT MORE THAN 35%
 WITH NOT LESS THAN 35% PHEGMATIZER)**

4919142

ORGANIC PEROXIDE

UN2886

Tert-butyl peroxy-2-ethylhexanoate, (not more than 30%) with 2,2-di-(tert-butylperoxy) butane, (not more than 35% with not less than 35% phlegmatizer) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode. The phlegmatizer is a material added to make the peroxide less reactive.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

TERT-BUTYL PEROXY-2-ETHYLHEXANOATE, (NOT MORE THAN 50% WITH PHLEGMATIZER) 4919144
ORGANIC PEROXIDE UN2888

Tert-butyl peroxy-2-ethylhexanoate, (not more than 50% with phlegmatizer) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode. The phlegmatizer is a material added to make the peroxide less reactive.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

TERT-BUTYL PEROXY-2-ETHYLHEXANOATE, (TECHNICALLY PURE)

4919141

ORGANIC PEROXIDE

UN2143

Tert-butyl peroxy-2-ethylhexanoate, (technically pure) is a clear colorless liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

TERT-BUTYL PEROXY-2-ETHYLHEXANOATE, NOT MORE 12%) WITH 2,2-DI(TERT-BUTYLPEROXY)BUTANE, (NOT MORE THAN 14% WITH NOT LESS THAN 14% PHLEGMATIZER AND 60% INERT INORGANIC SOLID)

4919143

ORGANIC PEROXIDE

UN2887

Tert-butyl peroxy-2-ethylhexanoate, not more 12%) with 2,2-di-(tert-butylperoxy)butane, (not more than 14% with not less than 14% phlegmatizer and 60% inert inorganic solid) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode. The phlegmatizer is a material added to make the peroxide less reactive.

Continued on next page

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**3-TERT-BUTYL PEROXY-3-PHENYLPHTHALIDE, 4919146
(TECHNICALLY PURE)**

ORGANIC PEROXIDE UN2596

3-tert-butyl peroxy-3-phenylphthalide, (technically pure) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE 4919145
(OR) TERT-BUTYL PEROXYISONONANOATE,
(TECHNICALLY PURE)**

ORGANIC PEROXIDE UN210

Tert-butyl peroxy-3,5,5-trimethylhexanoate (or) tert-butyl peroxyisononanoate, (technically pure) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode. The phlegmatizer is a material added to make the peroxide less reactive.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**TERT-BUTYL PEROXYACETATE, (NOT MORE THAN 4919147
52% IN SOLUTION)**

ORGANIC PEROXIDE UN2096

Tert-butyl peroxyacetate, (not more than 52% in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

TERT-BUTYL PEROXYACETATE, (NOT MORE THAN 76% IN SOLUTION) 4919148

ORGANIC PEROXIDE

UN2095

Tert-butyl peroxyacetate, (not more than 76% in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

TERT-BUTYL PEROXYBENZOATE (NOT MORE THAN 50% WITH INERT INORGANIC SOLID) 4919149

ORGANIC PEROXIDE

UN2890

Tert-butyl peroxybenzoate (not more than 50% with inert inorganic solid) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

TERT-BUTYL PEROXYBENZOATE, (NOT MORE THAN 75% IN SOLUTION) 4919150

ORGANIC PEROXIDE

UN2098

Tert-butyl peroxybenzoate, (not more than 75% in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

TERT-BUTYL PEROXYBENZOATE, (TECHNICALLY PURE OR) TERT-BUTYL PEROXYBENZOATE, (MORE THAN 75% IN SOLUTION) 4919151

ORGANIC PEROXIDE UN2097

Tert-butyl peroxybenzoate, (technically pure or) tert-butyl peroxybenzoate, (more than 75% in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

TERT-BUTYL PEROXYCROTONATE, (NOT MORE 76% IN SOLUTION) 4919152

ORGANIC PEROXIDE UN2183

Tert-butyl peroxyacrylonitrile, (not more 76% in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

N-BUTYL PEROXYDICARBONATE, (NOT MORE THAN 27% IN SOLUTION) 4919153

ORGANIC PEROXIDE UN2170

N-butyl peroxydicarbonate, (not more than 27% in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

TERT-BUTYL PEROXYDIETHYLACETATE, (TECHNICALLY PURE) 4919156

ORGANIC PEROXIDE UN2144

Tert-butyl peroxydiethylacetate, (technically pure) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

TERT-BUTYL PEROXYISOPROPYL CARBONATE, 4919159 (TECHNICALLY PURE) UN2103 ORGANIC PEROXIDE

Tert-butyl peroxyisopropyl carbonate, (technically pure) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

TERT-BUTYL PEROXYMALEATE, (NOT MORE THAN 4919161 55% AS A PASTE) UN2101 ORGANIC PEROXIDE

Tert-butyl peroxy maleate, (not more than 55% as a paste) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

TERT-BUTYL PEROXYMALEATE, (NOT MORE THAN 4919160 55% IN SOLUTION) UN2100 ORGANIC PEROXIDE

Tert-butyl peroxy maleate, (not more than 55% in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

TERT-BUTYL PEROXYDIETHYLACETATE, (33% WITH TERT-BUTYL PEROXYBENZOATE, (33%, AND SOLVENT) 4919155

ORGANIC PEROXIDE

UN2551

Tert-butyl peroxydiethylacetate, (33% with) tert-butyl peroxybenzoate, (33%, and solvent) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

TERT-BUTYL PEROXYISOBUTYRATE, (MORE THAN 52% BUT NOT MORE THAN 77% IN SOLUTION) 4919157

ORGANIC PEROXIDE

UN2142

Tert-butyl peroxyisobutyrate, (more than 52% but not more than 77% in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

TERT-BUTYL PEROXYISOBUTYRATE, (NOT MORE THAN 52% IN SOLUTION) 4919158

ORGANIC PEROXIDE

UN2562

Tert-butyl peroxyisobutyrate, (not more than 52% in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Continued on next page

TERT-BUTYL PEROXYMALEATE. (TECHNICALLY PURE) 4919162

ORGANIC PEROXIDE UN2099

Tert-butyl peroxy maleate, (technically pure) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

TERT-BUTYL PEROXYNEODECANOATE, (NOT MORE THAN 77% IN SOLUTION) 4919163

ORGANIC PEROXIDE UN2177

Tert-butyl peroxyneodecanoate, (not more than 77% in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

TERT-BUTYL PEROXYNEODECANOATE, (TECHNICALLY PURE) 4919164

ORGANIC PEROXIDE UN2594

Tert-butyl peroxyneodecanoate, (technically pure) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

TERT-BUTYL PEROXYPHthalATE, (TECHNICALLY PURE) 4919165

ORGANIC PEROXIDE UN2105

Tert-butyl peroxyphthalate, (technically pure) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

Continued on next page

If material on fire or involved in fire
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire
Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

TERT-BUTYL PEROXYPIVALATE, (NOT MORE THAN 77% IN SOLUTION) 4919166

ORGANIC PEROXIDE UN2110

Tert-butyl peroxyvalate, (not more than 77% in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire
Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

BUTYL PHENOL (CORROSIVE SOLID, N.O.S.) 4935629
CORROSIVE MATERIAL, BASIC UN1759

Butyl phenol is a white crystalline solid. It is used to make other chemicals. It is insoluble in water. It may burn though it may require some effort to ignite. It is corrosive to metals and tissue.

If material on fire or involved in fire
Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Solid streams of water may be ineffective
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire
Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

BUTYL PHOSPHORIC ACID (SEE ACID BUTYL PHOSPHATE 4933315)

N-BUTYL PHTHALATE 4962110
ORM-E NA9095
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)
SUBSTANCE (RQ-100/45.4)

N-butyl phthalate is a colorless oily liquid. It is used in paints and plastics and as a reaction media for chemical reactions. It is insoluble in water. It is combustible though it may take some effort to ignite.

If material on fire or involved in fire
Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Solid streams of water may be ineffective
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire
Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors or dusts
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Environmental considerations—land spill
Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- Use natural barriers or oil spill control booms to limit spill motion
- Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material
- Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms
- Remove trapped material with suction hoses
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

BUTYL TRICHLOROSILANE 4934215
CORROSIVE MATERIAL, ACIDIC, COMBUSTIBLE UN1747

Butyl trichlorosilane is a colorless liquid with a pungent odor. It is used to make various silicon containing compounds. It is combustible and has a flash point of 126 deg. F. It is readily decomposed by moisture or water to hydrochloric acid with evolution of heat. It is corrosive to metals and tissue.

If material on fire or involved in fire

- Use dry chemical, carbon dioxide, or dry sand
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

N-BUTYL-4,4-DI-(TERT-BUTYLPEROXY)VALERATE, 4919133
(NOT MORE THAN 52% WITH INERT SOLID)

ORGANIC PEROXIDE UN2141
 N-butyl-4,4-di-(tert-butylperoxy)valerate, (not more than 52% with inert solid) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

N BUTYL-4,4-DI-(TERT-BUTYLPEROXY)VALERATE, 4919134
(TECHNICALLY PURE)

ORGANIC PEROXIDE UN2140

N-butyl-4,4-di-(tert-butylperoxy)valerate, (technically pure) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

BUTYLAMINE 4908120
FLAMMABLE LIQUID UN1125
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Butylamine is a clear colorless liquid with an ammonia-like odor. It has a flash point of 10 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

It weighs 6.2 pounds per gallon.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents
Apply fluorocarbon-water foam to diminish vapor and fire hazard
Neutralize with sodium bisulfate (nahso4)

Environmental considerations—water spill

Add sodium bisulfate
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors
Vapor knockdown water is corrosive or toxic and should be diked for containment

TERT-BUTYLAMINE (BUTYLAMINE) 4909134
FLAMMABLE LIQUID UN1125
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Tert-butylamine is a clear, colorless liquid with an ammonia like odor. It has a flash point of 70 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

It weighs 6.2 pounds per gallon.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents

Apply fluorocarbon-water foam to diminish vapor and fire hazard

Neutralize with sodium bisulfate (nahso4)

Environmental considerations—water spill

Add sodium bisulfate
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

BUTYLENE, IMPURE, FOR FURTHER REFINING 4905711.
(LIQUEFIED PETROLEUM GAS)

FLAMMABLE GAS UN1075

Butylene is a colorless gas with a faint petroleum like odor. It is shipped as a liquefied gas under its vapor pressure. Contact with the liquid can cause frostbite. It is easily ignited. Its vapor is heavier than air and a flame can flash back to the source of leak very easily. The leak can either be a liquid or vapor leak. It can asphyxiate by the displacement of air. Under fire conditions the cylinder or tank car may violently rupture and rocket.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
- If material leaking (not on fire), downwind evacuation must be considered

BUTYRALDEHYDE FLAMMABLE LIQUID

4906119
UN1129

Butyraldehyde is a clear liquid with a pungent odor. It has a flash point of 10 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

BUTYRIC ACID CORROSIVE MATERIAL, ACIDIC, COMBUSTIBLE ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

4931414
UN2620

Butyric acid is a colorless liquid with an odor of rancid butter. It is combustible and has a flash point of 161 deg. F. It is soluble in water. It is corrosive to metals and tissue.

It weighs 8.0 pounds per gallon.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
 - Keep upwind
 - Avoid bodily contact with the material
 - Wear boots, protective gloves, and goggles
 - Do not handle broken packages without protective equipment
 - Wash away any material which may have contacted the body with copious amounts of water or soap and water
 - If contact with the material anticipated, wear full protective clothing
- #### Environmental considerations—land spill
- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 - Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Vapor knockdown water is corrosive or toxic and should be diked for containment

BUTYRONITRILE (FLAMMABLE LIQUID, N.O.S.) FLAMMABLE LIQUID

4909241
UN1993

Butyronitrile is a clear colorless liquid. It is used in the manufacture of other chemicals. It has a flash point of 76 deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

CADMIUM ACETATE 4962303
ORM-E NA2570
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Cadmium acetate is a colorless crystalline solid. It is used in ceramics and in chemical analysis. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Add ferric chloride (fcl3)
Adjust ph to neutral (ph-7)
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CADMIUM BROMIDE 4962305
ORM-E NA2570
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Cadmium bromide is a white to yellow crystalline solid. It is used in photography, printing, and lithography. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Add ferric chloride (fcl3)
Adjust ph to neutral (ph-7)
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CADMIUM CHLORIDE 4962505
ORM-E NA2570
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Cadmium chloride is a white crystalline solid. Cadmium chloride is used in photography, in fabric printing, in chemical analysis, and in many other uses. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Add ferric chloride (fcl3)
Adjust ph to neutral (ph-7)
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CALCIUM ARSENATE AND SULPHUR, DRY (CALCIUM ARSENATE) 4923218

POISON B UN1573
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Calcium or lead, arsenate and sulfur, dry is a yellow white to yellow powder. It is insoluble in water. It is toxic by inhalation (dust) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Add ferric chloride (fcl3)
Adjust ph to neutral (ph-7)
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CALCIUM ARSENATE, SOLID 4923217
POISON B UN1573
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Calcium arsenate solid is a white powder. It is very slightly soluble in water. It is toxic by inhalation (dust) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with
copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Cover solids with a plastic sheet to prevent dissolving in rain or fire
fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone,
or sodium bicarbonate

Add ferric chloride (FeCl₃)

Adjust pH to neutral (pH=7)

Use mechanical dredges or lifts to remove immobilized masses of
pollutants and precipitates

**CALCIUM BISULFITE SOLUTION (See CALCIUM HYDROGEN
SULFITE SOLUTION 4932331)**

**CALCIUM CARBIDE
FLAMMABLE SOLID
WATER REACTIVE**

**4916408
UN1402**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Calcium carbide exists as a greyish-black irregular lump solid. It is
used to make acetylene and in steel manufacture. It reacts with water
to form calcium hydroxide and acetylene, a flammable gas. The heat
from this reaction may be sufficient to ignite the acetylene.

If material on fire or involved in fire

Do not use water

Use graphite, soda ash, powdered sodium chloride, or suitable dry
powder

Carbon dioxide may be ineffective

If material not on fire and not involved in fire

Do not use water

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Keep material dry

Personnel protection

Avoid breathing dusts, and fumes from burning material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with
copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Cover solids with a plastic sheet to prevent dissolving in rain or fire
fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone,
or sodium bicarbonate

**CALCIUM CHLORATE
OXIDIZER**

**4918713
UN1452**

Calcium chlorate is a white crystalline solid. It is used in photography,
in pyrotechnics, and as a herbicide. It is soluble in water. It forms a very
flammable mixture with combustible materials and this mixture may be
explosive if the combustible material is finely divided. The mixture can
be ignited by friction. Contact with strong sulfuric acid can cause fires
or explosions. When mixed with ammonium salts, spontaneous decom-
position and ignition may result. Prolonged exposure of the material to
fire or heat can result in an explosion.

If material on fire or involved in fire

Flood with water

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with
copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involv-
ing this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 2500 feet

**CALCIUM CHLORITE
OXIDIZER**

**4918714
UN1453**

Calcium chlorite is a white granular solid. It is decomposed by water
to calcium hydroxide and chlorine dioxide, a nonflammable oxidizing
gas. The material itself is non-combustible, but it will accelerate the
burning of combustible materials. If the combustible material is finely
divided, the mixture may be explosive. Prolonged exposure of the ma-
terial to fire or heat may result in an explosion and the rupturing of the
containers.

If material on fire or involved in fire

Flood with water

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with
copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involv-
ing this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 2500 feet

**CALCIUM CHROMATE
ORM-E**

**4963307
NA9096**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Calcium chromate is a yellow powder. It is slightly soluble in water.
It is inhibitor, and for other uses. It is slightly soluble in water. It is non-
combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Continued on next page

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Add sodium bisulfite
- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
- Adjust pH to neutral (pH-7)
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CALCIUM CYANIDE, SOLID (OR) CALCIUM CYANIDE MIXTURE, SOLID 4923223

POISON B ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54) UN1575

Calcium cyanide, solid is a white crystalline powder or crystalline solid. It is slowly decomposed by water to give off hydrogen cyanide, a flammable poison gas. Contact with acids will cause rapid evolution of hydrogen cyanide. It is toxic by skin absorption through open wounds, by ingestion, and by inhalation of hydrogen cyanide from the decomposition of the material.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use foam, carbon dioxide or dry chemical
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors

If material not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Use water spray to knock-down vapors
- Do not use water on material itself

Personnel protection

- Avoid breathing vapors or dusts
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Add caustic soda
- Add calcium hypochlorite
- Adjust pH to neutral (pH-7)

CALCIUM HYDROGEN SULFITE SOLUTION (CALCIUM BISULPHITE) 4932331

CORROSIVE MATERIAL, ACIDIC NA2693

Calcium hydrogen sulfite solution is actually the solution of calcium sulfite and sulfur dioxide in water. It is a colorless to yellow liquid with an odor of sulfur dioxide. It is corrosive to metals.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

CALCIUM HYPOCHLORITE MIXTURE (DRY, CONTAINING MORE THAN 39 PERCENT AVAILABLE CHLORINE) 4918715

OXIDIZER ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4) UN1748

Calcium hypochlorite mixture is a white granular solid or tablets compressed from the granules with an odor of chlorine. It is used in water purifica purification, as a swimming pool disinfectant, as a bleaching compound, and for many other uses. It is noncombustible but it will accelerate the burning of combustible materials. It is decomposed by water with evolution of chlorine gas and heat. Prolonged exposure to fire or heat may result in the vigorous decomposition of the material and the rupture of its container. Material containing less than 39 percent available chlorine will undergo reactions as described above though it may take longer to initiate and the resulting reactions may not be as vigorous.

CALCIUM DODECYLBENZENESULFONATE 4963309

ORM-E ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454) NA9097

Calcium dodecylbenzenesulfonate is a white to light yellow granular solid. It is used as a detergent. It is soluble in water. It is non-combustible.

If material on fire or involved in fire

Flood with water
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 5000 feet

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Add sodium bisulfite
Add soda ash
Adjust pH to neutral (pH-7)
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CALCIUM HYPOCHLORITE, HYDRATED (MINIMUM 5.5% BUT NOT MORE THAN 10% WATER, AND CONTAINING MORE THAN 39% AVAILABLE CHLORINE) 4918795

OXIDIZER UN2880
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Calcium hypochlorite, hydrated is a white granular solid or tablets compressed from the granules having an odor of chlorine. It is used for water purification, disinfectant for swimming pools, for bleaching paper and textiles, and for many other uses. It is non-combustible, but it will accelerate the burning of combustible materials. It is decomposed by water with evolution of chlorine gas and heat. Prolonged exposure to fire or heat may result in the vigorous decomposition of the material and rupture of the container. Material containing less than 39% available chlorine will undergo reactions as described above though it may take longer to initiate, and the resulting reactions may not be as vigorous.

If material on fire or involved in fire

Flood with water
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 5000 feet

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Add sodium bisulfite
Add soda ash
Adjust pH to neutral (pH-7)
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CALCIUM METAL
FLAMMABLE SOLID
WATER REACTIVE

4916401
UN1401

Calcium metal is a silvery, soft metal that oxidizes to greyish white on exposure to air. It is used in metallurgy. It is decomposed by water to form calcium hydroxide and hydrogen, a flammable gas. The heat of this reaction may be sufficient to ignite the hydrogen and possibly the calcium itself.

If material on fire or involved in fire

Do not use water
Do not use carbon dioxide
Use graphite, soda ash, powdered sodium chloride, or suitable dry powder

If material not on fire and not involved in fire

Do not use water
Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep material dry

Personnel protection

Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Avoid breathing fumes from burning material

CALCIUM NITRATE
OXIDIZER

4918716
UN1454

Calcium nitrate is a white to light grey granular solid. It is used in fertilizers, explosives and pyrotechnics. It is soluble in water. It is non-combustible but it will accelerate the burning of combustible materials. If large quantities are involved in the fire or the combustible material is finely divided an explosion may result. Prolonged exposure of the material to fire or heat may result in an explosion. Toxic oxides of nitrogen are produced in fires involving this material.

If material on fire or involved in fire

Flood with water
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 2500 feet

**CALCIUM PERMANGANATE
OXIDIZER**

**4918718
UN1456**

Calcium permanganate is a purplish colored crystalline solid. It is used as a disinfectant and deodorizer, in water purification, and for many other uses. It is soluble in water. The material itself is noncombustible but it will accelerate the burning of combustible material; if the combustible material is finely divided the mixture may be explosive. Contact with liquid combustible materials may result in spontaneous ignition. Contact with sulfuric acid may cause fires or explosions.

If material on fire or involved in fire

Flood with water

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 2500 feet

**CALCIUM PEROXIDE
OXIDIZER**

**4918717
UN1457**

Calcium peroxide is a greyish white granular material. It is used in baking, in medicine, in bleaching oils, and for many other uses. It is insoluble in water and slowly decomposed by water. It is noncombustible but it will accelerate the burning of combustible material; if the combustible material is finely divided the mixture may be explosive. Mixtures of combustible material and the peroxide can be ignited by friction or contact with moisture.

If material on fire or involved in fire

Flood with water

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 2500 feet

**CALCIUM PHOSPHIDE
FLAMMABLE SOLID, POISONOUS
WATER REACTIVE**

**4916310
UN1360**

Calcium phosphide appears as red-brown crystals to grey granular lumps. It reacts with water to form calcium hydroxide and phosphine, a flammable poisonous gas. Phosphine will normally ignite spontaneously in contact with air. If there is an excess of water this fire of phosphine will not normally ignite surrounding combustible material.

If material on fire or involved in fire

Do not use water

Use dry chemical or carbon dioxide

If material not on fire and not involved in fire

Do not use water

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Keep material dry

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

**CALCIUM RESINATE
FLAMMABLE SOLID**

**4916703
UN1313**

Calcium resinate is a greyish white to yellow amorphous powder. If it comes in contact with air, spontaneous heating may result. This heat may be sufficient to ignite the material itself or surrounding combustible material. It is insoluble in water.

If material on fire or involved in fire

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

**CALCIUM RESINATE, FUSED
FLAMMABLE SOLID**

**4916704
UN1314**

Calcium resinate, fused is in the form of greyish lumps made by fusing the powdered material. If it comes in contact with air, spontaneous heating may result. This heat may be sufficient to ignite the material itself or surrounding combustible material. It is insoluble in water.

If material on fire or involved in fire

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

**CALCIUM-MANGANESE-SILICON ALLOYS,
(FLAMMABLE SOLID, N.O.S.)
FLAMMABLE SOLID**

**4916767
UN1325**

Calcium-manganese-silicon alloys exist as grey lustrous crystalline lumps. It may react with water to give off hydrogen, a flammable gas. The heat of this reaction may be sufficient to ignite the hydrogen.

If material on fire or involved in fire

- Do not use water
- Use graphite, soda ash, powdered sodium chloride, or suitable dry powder

If material not on fire and not involved in fire

- Do not use water
- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep material dry

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Avoid breathing fumes from burning material

**CALCIUM, METAL CRYSTALLINE
FLAMMABLE SOLID
WATER REACTIVE**

4916402
NA1401

Calcium, metal, crystalline is a greyish white granular metal. It is used in metallurgy. As it is finely divided it is more reactive with water than non-crystalline metallic calcium. It reacts with water to form hydrogen, a flammable gas. The heat of this reaction may be sufficient to ignite the hydrogen and also the calcium itself.

If material on fire or involved in fire

- Do not use water
- Do not use carbon dioxide
- Use graphite, soda ash, powdered sodium chloride, or suitable dry powder

If material not on fire and not involved in fire

- Do not use water
- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep material dry

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Avoid breathing fumes from burning material

**CALCIUM ARSENITE, SOLID
POISON B
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)**

4923219
NA1574

Calcium arsenite, solid is a white powder. It is insoluble in water. It is toxic by inhalation (dust) and by ingestion.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use foam, carbon dioxide or dry chemical

If material not involved in fire

- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Add calcium hypochlorite
- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
- Add ferric chloride (feci3)
- Adjust ph to neutral (ph-7)
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**CAMPBOR OIL
COMBUSTIBLE LIQUID**

4913153
UN1130

Camphor oil is a colorless liquid with a characteristic odor. It has a flash point of 125 deg. F. It is insoluble in water and it is generally lighter than water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**CANNON PRIMERS
CLASS C EXPLOSIVE**

4903120

Cannon primer is a small device containing a small amount of a percussion sensitive explosive which ignites a large charge of deflagrating explosive which in turn ignites the gun propellant.

If material on fire or involved in fire

- Flood with water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Approach fire with caution
- Avoid breathing dusts, and fumes from burning material
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 1500 feet

**CAPRYLYL PEROXIDE SOLUTION
ORGANIC PEROXIDE**

**4919517
NA2129**

Caprylyl peroxide solution is a clear colorless to straw colored liquid with a sharp odor. The peroxide itself is a straw colored liquid. The solution may take some effort to ignite but once ignited it burns with increasing vigor as the fire progresses. It strongly supports the burning of combustible material. Containers of the solution, if exposed to fire or flame, may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors or dusts
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**CAPTAN (AGRICULTURAL INSECTICIDES, NEC,
LIQUID)**

4961167

ORM-E

NA9099

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)

Captan is a white solid dissolved in a liquid carrier. It is used as a fungicide. It is a water emulsifiable liquid. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

- Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Remove trapped material with suction hoses
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**CAPTAN (AGRICULTURAL INSECTICIDES, NEC,
OTHER THAN LIQUID)**

4961164

ORM-E

NA9099

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)

Captan is a white solid. It is used as a fungicide. It is a wettable powder. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Remove trapped material with suction hoses
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**CAPTAN (INSECTICIDES, OTHER THAN
AGRICULTURAL, NEC)**

4961110

ORM-E

NA9099

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)

Captan is a white solid or the solid dissolved in a liquid carrier. It is used as a fungicide. It is a wettable powder or water emulsifiable liquid. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Remove trapped material with suction hoses
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CARBAMATE PESTICIDE, LIQUID, N.O.S. 4921625
(COMPOUNDS AND PREPARATIONS)
(AGRICULTURAL INSECTICIDES, NEC, LIQUID)
POISON B UN2757

Carbamate pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The carrier may burn though it may require some effort to ignite. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

CARBAMATE PESTICIDE, LIQUID, N.O.S. 4910527
(COMPOUNDS AND PREPARATIONS)
(INSECTICIDES, OTHER THAN AGRICULTURAL, NEC)

FLAMMABLE LIQUID UN2758

Carbamate pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The primary hazard of this material is the flammability of the carrier. It has a flash point below 100 deg. F. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wear self-contained breathing apparatus when fighting fires involving this material

CARBAMATE PESTICIDE, LIQUID, N.O.S. 4910528
(COMPOUNDS AND PREPARATIONS)
(AGRICULTURAL INSECTICIDES, NEC, LIQUID)
FLAMMABLE LIQUID UN2758

Carbamate pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The primary hazard of this material is the flammability of the carrier. It has a flash point below 100 deg. F. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wear self-contained breathing apparatus when fighting fires involving this material

CARBAMATE PESTICIDE, LIQUID, N.O.S. 4921624
(COMPOUNDS AND PREPARATIONS)
(INSECTICIDES, OTHER THAN AGRICULTURAL, NEC)

POISON B UN2757

Carbamate pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The carrier may burn though it may require some effort to ignite. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**CARBAMATE PESTICIDE, SOLID, N.O.S.
(COMPOUNDS AND PREPARATIONS)
(AGRICULTURAL INSECTICIDES, NEC, OTHER
THAN LIQUID)**

4921627

POISON B UN2757

Carbamate pesticide is a solid or a liquid absorbed on a dry carrier. It is a wettable powder. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with
copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involv-
ing this material

If contact with the material anticipated, wear full protective clothing

**CARBAMATE PESTICIDE, SOLID, N.O.S.
(COMPOUNDS AND PREPARATIONS)
(INSECTICIDES, OTHER THAN AGRICULTURAL,
NEC)**

4921626

POISON B UN2757

Carbamate pesticide is a solid or a liquid absorbed on a dry carrier. It is a wettable powder. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with
copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involv-
ing this material

If contact with the material anticipated, wear full protective clothing

**CARBARYL (AGRICULTURAL INSECTICIDES, NEC,
LIQUID)**

4941121

**ORM-A NA2757
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)**

Carbaryl is a white crystalline solid dissolved in a liquid carrier. It is used as a pesticide. It is a water emulsifiable liquid. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Keep upwind

Wear boots, protective gloves, and goggles

Avoid breathing vapors or dusts

Wash away any material which may have contacted the body with
copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Dike surface flow using soil, sand bags, foamed polyurethane, or
foamed concrete

Absorb bulk liquid with fly ash, cement powder, sawdust, or com-
mercial sorbents

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount
in region of 10ppm or greater concentration

Use mechanical dredges or lifts to remove immobilized masses of
pollutants and precipitates

**CARBARYL (AGRICULTURAL INSECTICIDES, NEC,
OTHER THAN LIQUID)**

4941122

**ORM-A NA2757
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)**

Carbaryl is a white crystalline solid. It is used as a pesticide. It is a wettable powder. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Keep upwind

Wear boots, protective gloves, and goggles

Avoid breathing vapors or dusts

Wash away any material which may have contacted the body with
copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Cover solids with a plastic sheet to prevent dissolving in rain or fire
fighting water

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount
in region of 10ppm or greater concentration

Remove trapped material with suction hoses

Use mechanical dredges or lifts to remove immobilized masses of
pollutants and precipitates

**CARBARYL (INSECTICIDES, OTHER THAN
AGRICULTURAL, NEC)**

4941120

**ORM-A NA2757
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)**

Carbaryl is a white crystalline solid or the solid dissolved in a liquid carrier. It is used as a pesticide. It is a wettable powder or water emulsifiable liquid. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**CARBOFURAN
POISON B**4921525
NA2757**ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)**

Carbofuran is a white solid or the solid dissolved in a liquid carrier. It is used as a pesticide. It is a wettable powder or water emulsifiable liquid. It is toxic by inhalation, skin absorption, and or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**CARBOFURAN MIXTURE, LIQUID (AGRICULTURAL
INSECTICIDES, NEC, LIQUID)**

4921524

POISON B

NA2757

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)

Carbofuran mixture, liquid is a white solid dissolved in a liquid carrier. It is used as a pesticide. It is a water emulsifiable liquid. It is toxic by inhalation, skin absorption, and or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CARBOLIC ACID OR PHENOL

4921220

POISON B, CORROSIVE, COMBUSTIBLE

UN1671

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Carbolic acid or phenol is a colorless crystalline solid with a characteristic odor. It is used to make plastics, adhesives, and other chemicals. It absorbs moisture from the air and liquefies. It is soluble in water and its vapor is heavier than air. It is also combustible. It is corrosive to the skin and lethal amounts can be absorbed through the skin.

It weighs 8.9 pounds per gallon.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Continued on next page

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CARBOLIC ACID, LIQUID OR PHENOL, LIQUID, 4912120
(LIQUID TAR ACID CONTAINING OVER 50%
BENZO-PHENOL)

POISON B. CORROSIVE, COMBUSTIBLE NA2821
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Carbolic acid, liquid or phenol, liquid is a colorless liquid with a characteristic odor. It is used to make plastics, adhesives, and other chemicals. It is also combustible. Its vapor is heavier than air and it is soluble in water. It is corrosive to the skin. Lethal quantities of the material can be absorbed through the skin.

It weighs 8.9 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CARBON BISULFIDE (OR) CARBON DISULFIDE 4908125
FLAMMABLE LIQUID UN1131
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Carbon disulfide is a clear colorless to light yellow liquid with a strong disagreeable odor. It is used in the manufacture of rayon and cellophane, in the manufacture of flotation agents and as a solvent. It has a flash point of -22 deg. F. and is flammable over a wide vapor-air concentration range. The vapors are readily ignited; the heat of a common light bulb may be sufficient. It is heavier than water and insoluble in water. Its vapors are heavier than air.

It weighs 10.5 pounds per gallon.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Use dry chemical or carbon dioxide
- Do not use water

Do not extinguish fire unless flow can be stopped

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Apply fluorocarbon-water foam to diminish vapor and fire hazard

Environmental considerations—water spill

- Neutralize with agricultural lime (staked lime), crushed limestone, or sodium bicarbonate
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Combustion products include corrosive or toxic vapors

CARBON BLACK OIL (COMBUSTIBLE LIQUID, N.O.S.) 4915323
COMBUSTIBLE LIQUID NA1993

Carbon black oil is a dark colored liquid with a petroleum-like odor. It has a flash point between 100 and 200 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**CARBON BLACK OIL (FLAMMABLE LIQUID, N.O.S.) 4910323
FLAMMABLE LIQUID UN1993**

Carbon black oil is a dark colored liquid with a petroleum like odor. It has a flash point of less than 100 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**CARBON DIOXIDE—OXYGEN MIXTURE 4904420
NONFLAMMABLE GAS UN1014**

Carbon dioxide—oxygen mixture is a colorless odorless gas. Both carbon dioxide and oxygen are noncombustible; however, oxygen can accelerate the burning of a fire. It may only be shipped in cylinders.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not involved in fire

Keep sparks, flames, and other sources of ignition away
Attempt to stop leak if without hazard

Personnel protection

Wear protective gloves and goggles
Do not handle broken packages without protective equipment
Approach fire with caution

**CARBON DIOXIDE-AIR MIXTURE (COMPRESSED 4904510
GAS, N.O.S.)
NONFLAMMABLE GAS UN1956**

Carbon dioxide-air mixture is a colorless odorless gas mixture. It is noncombustible. It may only be shipped in cylinders.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Personnel protection

Wear protective gloves and goggles
Do not handle broken packages without protective equipment

**CARBON DIOXIDE-ETHYLENE OXIDE GAS MIXTURE 4904511
(COMPRESSED GAS, N.D.S.)
NONFLAMMABLE GAS UN1956**

Carbon dioxide-ethylene oxide mixture is a colorless gas with an ether-like odor. It is used as a fumigant. Carbon dioxide is noncombustible. Ethylene oxide is flammable. The mixture can asphyxiate by displacement of air. It may only be shipped in cylinders.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Personnel protection

Avoid breathing vapors
Keep upwind
Wear protective gloves and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**CARBON DIOXIDE-ETHYLENE OXIDE MIXTURE 4905820
(COMPRESSED GAS, N.O.S.)
FLAMMABLE GAS UN1954**

Carbon dioxide-ethylene oxide is a colorless gas with an ether like odor. It is easily ignitable and may only be shipped in cylinders. Carbon dioxide is noncombustible and ethylene oxide is flammable. Both are heavier than air. A flame can flash back to the source of leak very easily. It can asphyxiate by the displacement of air. Under fire conditions cylinders may violently rupture and rocket.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear protective gloves and goggles
Do not handle broken packages without protective equipment
Approach fire with caution

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

CARBON DIOXIDE-NITROGEN GAS MIXTURE 4904512
(COMPRESSED GAS, N.O.S.)

NONFLAMMABLE GAS UN1956

Carbon dioxide-nitrogen gas mixture is a colorless odorless gas. Both carbon dioxide and nitrogen are noncombustible. The mixture can asphyxiate by the displacement of air. It may only be shipped in cylinders.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Personnel protection

Avoid breathing vapors

Keep upwind

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

CARBON DIOXIDE-NITROUS OXIDE MIXTURE 4904513
NONFLAMMABLE GAS UN1015

Carbon dioxide-nitrous oxide mixture is a colorless sweet tasting gas. Both carbon dioxide and nitrous oxide are noncombustible. The mixture can asphyxiate by the displacement of air. It may only be shipped in cylinders

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Personnel protection

Avoid breathing vapors

Keep upwind

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

CARBON DIOXIDE-PROPYLENE OXIDE GAS MIXTURE 4904514
(COMPRESSED GAS, N.O.S.)

NONFLAMMABLE GAS UN1956

Carbon dioxide-propylene oxide gas mixture is a colorless gas with an ether like odor. Carbon dioxide is noncombustible. Propylene oxide is flammable. The mixture can separate with the flammable propylene oxide collecting in low areas. The mixture can asphyxiate by the displacement of air. It may only be shipped in cylinders.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Personnel protection

Avoid breathing vapors

Keep upwind

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

CARBON DIOXIDE-PROPYLENE OXIDE MIXTURE 4905815
(COMPRESSED GAS, N.O.S.)

FLAMMABLE GAS UN1954

Carbon dioxide propylene oxide mixture is a colorless odorless gas. It is easily ignited and may only be shipped in cylinders. Carbon dioxide is noncombustible and propylene oxide is flammable. Both are heavier than air. A flame can flash back to the source of leak very easily. It can asphyxiate by the displacement of air. Under fire conditions cylinders may violently rupture and rocket.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

Approach fire with caution

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet

If material leaking (not on fire), downwind evacuation must be considered

CARBON DIOXIDE, LIQUEFIED 4904509
NONFLAMMABLE GAS UN2187

Carbon dioxide, liquefied is a colorless liquid. It is used as a refrigerant, in fire extinguishers, and in making carbonated beverages. It is noncombustible. Contact with the liquid will cause frostbite. The gas is heavier than air and can asphyxiate by the displacement of air.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water

Do not use water on material itself

Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Do not use water on material itself

Personnel protection

Avoid breathing vapors

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

CARBON MONOXIDE 4905709
FLAMMABLE GAS UN1016

Carbon monoxide is a colorless, odorless gas. Prolonged exposure to carbon monoxide rich atmospheres may be fatal. It is easily ignited and may be shipped only in cylinders. It is just lighter than air and a flame can flash back to the source of leak very easily. Under fire conditions the cylinders may violently rupture and rocket.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

CARBON REMOVER, LIQUID

4910130

FLAMMABLE LIQUID

UN1132

Carbon remover is a colorless liquid with a petroleum-like odor. It has a flash point of less than 100 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

CARBON TETRACHLORIDE

4940320

ORM-A

UN1846

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Carbon tetrachloride is a clear colorless heavy liquid with a characteristic odor. It is used as a solvent, in the manufacture of other chemicals, as an agricultural fumigant, and for many other uses. It is heavier than water and insoluble in water. It is non-combustible. It can cause illness by inhalation, skin absorption and/or ingestion.

It weighs 13.2 pounds per gallon.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Apply "universal" gelling agent to immobilize spill

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom

Remove trapped material with suction hoses

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Vapor knockdown water is corrosive or toxic and should be diked for containment

Thermal decomposition to phosgene can occur

CARTRIDGE CASES, EMPTY, PRIMED

4903140

CLASS C EXPLOSIVE

Cartridge cases, empty, primed consist of small arms cartridge cases, containing no propellant or projectile, with a smallarms primer attached to the base.

If material on fire or involved in fire

- Flood with water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Approach fire with caution
- Avoid breathing dusts, and fumes from burning material
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 1500 feet

CARTRIDGE, PRACTICE AMMUNITION

4903150

CLASS C EXPLOSIVE

Cartridge, practice ammunition consists of a metal cartridge case, primed with a limited amount of propelling charge and a solid projectile or solid projectile with smoke spotting charge.

If material on fire or involved in fire

- Flood with water
 - Apply water from as far a distance as possible
- If material not on fire and not involved in fire**
- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Approach fire with caution
- Avoid breathing dusts, and fumes from burning material
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 1500 feet

**CAUSTIC POTASH, DRY, SOLID, FLAKE, BEAD, OR GRANULAR
(See POTASSIUM HYDROXIDE, DRY, SOLID, FLAKE, BEAD, OR GRANULAR 4935225)****CAUSTIC POTASH, LIQUID OR SOLUTION (See POTASSIUM HYDROXIDE, SOLUTION 4935230)**

CAUSTIC SODA AND CAUSTIC POTASH, MIXED, IN SOLUTION (POTASSIUM HYDROXIDE, LIQUID, OR SOLUTION) 4935244
CORROSIVE MATERIAL UN1814
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Caustic soda and caustic potash, mixed, in solution is a white solid dissolved in water. It is used in chemical manufacturing, petroleum refining, cleaning compounds, and for many other uses. It is corrosive to metals and tissue. It is non-combustible.

It weighs 12.8 pounds per gallon.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing vapors or dusts

Avoid bodily contact with the material

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Neutralize with vinegar or other dilute acid

Environmental considerations—water spill

Neutralize with dilute acid or removable strong acid

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

CAUSTIC SODA AND CAUSTIC POTASSIUM, MIXED, IN SOLUTION (SODIUM HYDROXIDE LIQUID (OR) SOLUTION) 4935245

CORROSIVE MATERIAL UN1824
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Caustic soda and caustic potassium, mixed, in solution is the white solid material dissolved in water. It is non-combustible. It dissolves in water with release of heat. It is corrosive to metals and tissue.

It weighs 12.7 pounds per gallon.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Personnel protection

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Neutralize with vinegar or other dilute acid

Environmental considerations—water spill

Neutralize with dilute acid or removable strong acid

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

CAUSTIC SODA SOLUTION SPENT (SODIUM HYDROXIDE SOLUTION) 4935206
CORROSIVE MATERIAL, BASIC UN1824
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Caustic soda solution, spent is a colorless to dark colored liquid. It is at least partially soluble in water with release of heat. It is corrosive to metals and tissue.

It weighs 12.7 pounds per gallon.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Personnel protection

Avoid breathing vapors

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Neutralize with vinegar or other dilute acid

Environmental considerations—water spill

Neutralize with dilute acid or removable strong acid

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

CAUSTIC SODA, DRY, SOLID, FLAKE, BEAD, OR GRANULAR (See SODIUM HYDROXIDE, DRY, SOLID, FLAKE, BEAD, OR GRANULAR 4935235)

CAUSTIC SODA, LIQUID OR SOLUTION (See SODIUM HYDROXIDE, SOLUTION 4935240)

CELLULOSE FILM, NEC, PRINTED, (FLAMMABLE SOLID, N.O.S.) 4917397

FLAMMABLE SOLID UN1325

Cellulose film, nec, printed is a flammable solid when made of nitro-cellulose. It is then easily ignited and burns with great rapidity. Older film may deteriorate and be liable to spontaneous heating and ignition.

Toxic oxides of nitrogen are produced during combustion.

If material on fire or involved in fire

Flood with water

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

CEMENT OR CONCRETE WATER PROOFING COMPOUNDS, LIQUID OR PASTE (COMBUSTIBLE LIQUID, N.O.S.) 4915462

COMBUSTIBLE LIQUID NA1993

Cement or concrete water proofing compounds, liquid or paste are materials containing a solvent having a closed cup flash point between 100 and 199 deg. F. The hazard of these materials is combustibility.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

CEMENT OR CONCRETE WATER PROOFING COMPOUNDS, LIQUID OR PASTE (FLAMMABLE LIQUID, N.O.S.) 4910462

FLAMMABLE LIQUID UN1993

Cement or concrete water proofing compounds, liquid or paste are materials containing a solvent having a closed cup flash point of less than 100 deg. F. The hazard of these materials is flammability.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

CEMENT, ADHESIVE, N.O.S. COMBUSTIBLE LIQUID (See CEMENT, LIQUID, N.O.S., COMBUSTIBLE LIQUID 4915114)

CEMENT, ADHESIVE, N.O.S., FLAMMABLE LIQUID (See CEMENT, LIQUID, N.O.S., FLAMMABLE LIQUID 4910114)

CEMENT, CONTAINER LINOLEUM, TILE, OR WALLBOARD, LIQUID 4910112

FLAMMABLE LIQUID NA1133

Cement, container linoleum, tile, or wallboard, liquid are the solutions of various gums, resins etc. in different solvents. The liquids are generally quite thick and may range from clear colorless to black "tar," the flash point of the cement depends on the solvent used but it will be less than 100 deg. F.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

CEMENT, CORK, INSULATION, LIQUID (CEMENT, LIQUID, N.O.S.) 4910458

FLAMMABLE LIQUID NA1133

Cement, cork, insulation, liquid is a solution of various gums and resins in various solvents. The liquids are generally quite thick and range from clear colorless to black "tar". The flash point depends on the solvents used; but it will be below 100 deg. F. The hazard of these materials is flammability.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

CEMENT, CORK, INSULATION, LIQUID (CEMENT, LIQUID, N.O.S.) 4915458

COMBUSTIBLE LIQUID NA1133

Cement, cork, insulation, liquid is a solution of various gums and resins in various solvents. The liquids are generally quite thick and range from clear colorless to black "tar." the flash point depends on the solvents used but it will be between 100 and 199 deg. F. The hazard of these materials is combustibility.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

CEMENT, LEATHER 4910110
FLAMMABLE LIQUID NA1133

Cement, leather is the solution of various gums and resins in various solvents. The liquids are generally quite thick and may range from clear colorless to black "tar". The flash point of the cement depends on the solvent used but it will be less than 100 deg. F.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

CEMENT, LIQUID, N.O.S. 4910114
FLAMMABLE LIQUID NA1133

Cement, liquid, n.o.s. are solutions of various gums and resins in various solvents. The liquids are generally quite thick and may range from clear to black "tar". The flash point of the cement depends on the solvent used but it will be less than 100 deg. F.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

CEMENT, LIQUID, N.O.S. 4915114
COMBUSTIBLE LIQUID NA1133

Cement, liquid, n.o.s. are solutions of various gums and resins in various solvents. The liquids are generally quite thick and may range from clear to black "tar". The flash point of the cement depends on the solvent used but it will be between 100 and 199 deg. F.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

CEMENT, PYROXYLIN 4910116
FLAMMABLE LIQUID NA1133

Cement pyroxylin is pyroxylin plastic dissolved in a solvent. The flash point of the cement depends upon the solvent used but it will be less than 100 deg. F. The film deposited by the evaporation of the solvent is easily ignited and once ignited burns with great rapidity.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

CEMENT, ROOFING, LIQUID 4910118
FLAMMABLE LIQUID NA1133

Cement, roofing, liquid is a solution of various gums and resins in various solvents. The liquids are quite thick and are generally black "tars". The flash point of the cement depends on the solvent used but it will be less than 100 deg. F.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**CEMENT, RUBBER
FLAMMABLE LIQUID**

**4910120
NA1133**

Cement, rubber is a solution of various gums and resins in various solvents. The liquid is quite thick and is generally a milky white color. The flash point of the cement depends upon the solvent used but it will be less than 100 deg. F.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**CESIUM METAL
FLAMMABLE SOLID
WATER REACTIVE**

**4916405
UN1407**

Cesium metal is a silver white metal readily tarnished greyish white by air. It is used in electronics, as a catalyst in chemical processing, and for many other uses. It melts at 82 deg. F. It is violently decomposed by water giving cesium hydroxide and hydrogen, a flammable gas. The heat of this decomposition may be sufficient to ignite the hydrogen.

If material on fire or involved in fire

- Do not use water
- Do not use carbon dioxide
- Use graphite, soda ash, powdered sodium chloride, or suitable dry powder

If material not on fire and not involved in fire

- Do not use water
- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep material dry
- Do not attempt to sweep up dry material

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Avoid breathing fumes from burning material

**CHAMPAGNE (ALCOHOLIC BEVERAGE)
FLAMMABLE LIQUID**

**4910345
UN1170**

Champagne is a variable colored bubbling liquid having the odor characteristic of fermented liquors. It has a flash point between 73 and 100 deg. F. It is soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**CHAMPAGNE (ALCOHOLIC BEVERAGE)
COMBUSTIBLE LIQUID**

**4915312
UN1170**

Champagne is a variable colored bubbling liquid having the odor characteristic of fermented liquors. It has a flash point between 100 and 199 deg. F. It is soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**CHARCOAL BRIQUETTES (CHARCOAL BRIQUETTES
OR PELLETS, WITH PETROLEUM BINDER)**

**4917311
NA1361**

Charcoal briquettes are powdered or granular charcoal mixed with a tar or starch and water binder and pressed into regular lumps. The hazard is that of spontaneous heating if the charcoal briquettes are not properly cooled after manufacture.

If material on fire or involved in fire

- Remove burning material from load if safe and practicable to do so
- Use dry chemical or carbon dioxide
- Use water only if flooding quantities are available

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material dry

**CHARCOAL BRIQUETTES (CHARCOAL BRIQUETTES
OR PELLETS, WITHOUT PETROLEUM BINDER)**

**4917312
NA1361**

Charcoal briquettes are powdered or granular charcoal mixed with a tar or starch and water binder and pressed into regular lumps. The hazard is that of spontaneous heating if the charcoal briquettes are not properly cooled after manufacture.

Continued on next page

If material on fire or involved in fire

Remove burning material from load if safe and practicable to do so
Use dry chemical or carbon dioxide
Use water only if flooding quantities are available

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material dry

**CHARCOAL BRIQUETTES (CHARCOAL BRIQUETTES,
COMPRESSED, SELF-IGNITING) 4917313
FLAMMABLE SOLID NA1361**

Charcoal briquettes are powdered or granular charcoal mixed with a tar or starch and water binder and pressed into regular lumps. The hazard is that of spontaneous heating if the charcoal briquettes are not properly cooled after manufacture.

If material on fire or involved in fire

Remove burning material from load if safe and practicable to do so
Use dry chemical or carbon dioxide
Use water only if flooding quantities are available

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material dry

**CHARCOAL SCREENINGS, MADE FROM "PINON" 4917320
WOOD
FLAMMABLE SOLID NA1361**

Charcoal screenings, made from "pinon" wood is a finely divided black solid. It is fairly easily ignited. The main hazard is that of spontaneous heating if the charcoal has not been properly cooled after manufacture.

If material on fire or involved in fire

Remove burning material from load if safe and practicable to do so
Use dry chemical or carbon dioxide
Use water only if flooding quantities are available

If material not on fire and not involved in fire

Keep material dry

**CHARCOAL, ACTIVATED 4917310
FLAMMABLE SOLID UN1362**

Charcoal, activated is a black granular material that has been treated to improve its absorptive ability. The hazard is that of spontaneous heating if the charcoal is not properly cooled after manufacture.

If material on fire or involved in fire

Remove burning material from load if safe and practicable to do so
Do not use carbon dioxide

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material dry

**CHARCOAL, CORN COB OR COTTONSEED OR RICE 4917394
HULL, NOT ACTIVATED (CHARCOAL, SHELL)
FLAMMABLE SOLID UN1325**

Charcoal, corn cob or cottonseed or rice hull, not activated is a black solid. The hazard in transportation is that of spontaneous heating if the material is not properly cooled after manufacture, or if it should become wet.

If material on fire or involved in fire

Remove burning material from load if safe and practicable to do so
Use dry chemical or carbon dioxide
Use water only if flooding quantities are available

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material dry

**CHARCOAL, OTHER THAN ANIMAL OR WOOD, NEC. 4917395
NOT ACTIVATED, (FLAMMABLE SOLID, N.O.S.)
FLAMMABLE SOLID UN1325**

Charcoal, other than animal or wood, nec, not activated is a black solid. The hazard in transportation is that of spontaneous heating if the material is not properly cooled after manufacture or if it should become wet.

If material on fire or involved in fire

Remove burning material from load if safe and practicable to do so
Use dry chemical or carbon dioxide
Use water only if flooding quantities are available

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material dry

**CHARCOAL, SHELL 4917314
FLAMMABLE SOLID NA1361**

Charcoal, shell is made from coconut shells, walnut shells, fruit pits, or other similar material. The hazard is that of spontaneous heating if the charcoal is not properly cooled after manufacture.

If material on fire or involved in fire

Remove burning material from load if safe and practicable to do so
Use dry chemical or carbon dioxide
Use water only if flooding quantities are available

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material dry

**CHARCOAL, WOOD SCREENINGS, OTHER THAN 4917322
"PINON" WOOD SCREENINGS
FLAMMABLE SOLID NA1361**

Charcoal, wood screenings, other than "pinon" wood screenings is a finely divided black solid. It is fairly easily ignited. The main hazard is that of spontaneous heating if the charcoal has not been properly cooled after manufacture.

If material on fire or involved in fire

Remove burning material from load if safe and practicable to do so
Use dry chemical or carbon dioxide
Use water only if flooding quantities are available

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material dry

**CHARCOAL, WOOD, GROUND, CRUSHED, 4917316
GRANULATED, (OR) PULVERIZED
FLAMMABLE SOLID NA1361**

Charcoal, wood, ground, crushed, granulated, or pulverized is a finely divided black solid. It is fairly easily ignited. The main hazard is that of spontaneous heating if the charcoal has not been properly cooled after manufacture.

If material on fire or involved in fire

Remove burning material from load if safe and practicable to do so
Use dry chemical or carbon dioxide
Use water only if flooding quantities are available

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material dry

**CHARCOAL, WOOD, LUMP 4917318
FLAMMABLE SOLID NA1361**

Charcoal, wood, lump is large pieces of black material. The hazard in transportation is that of spontaneous heating if the charcoal has not been properly cooled after manufacture.

If material on fire or involved in fire

- Remove burning material from load if safe and practicable to do so
 - Use dry chemical or carbon dioxide
 - Use water only if flooding quantities are available
- If material not on fire and not involved in fire**
- Keep sparks, flames, and other sources of ignition away
 - Keep material dry

CHEMICAL AMMUNITION, NONEXPLOSIVE (CONTAINING A POISON A MATERIAL) 4920925

POISON A UN2016

Chemical ammunition, nonexplosive (containing a poison a material) may be any type of projectile, bomb, grenade, etc. containing a material classed as poison a, and does not contain any explosive components-the poison a material can cause death by inhalation or skin absorption. Of very small quantities. It may or may not be combustible.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If material leaking (not on fire), downwind evacuation must be considered

CHEMICAL AMMUNITION, NONEXPLOSIVE (CONTAINING A POISON B MATERIAL) 4923915

POISON B UN2016

Chemical ammunition, nonexplosive (containing a poison b material) may be any type of projectile, bomb, grenade, etc. containing a material classed as a poison b, and does not contain any explosive components. The poison b material can cause death by inhalation, ingestion or skin absorption. The poison b material may or may not be combustible.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

CHEMICAL AMMUNITION, NONEXPLOSIVE (CONTAINING AN IRRITATING MATERIAL) 4925840

IRRITATING MATERIAL UN2017

Chemical ammunition, nonexplosive (containing an irritating material) may be any type of projectile, bomb, grenade, etc. containing a substance classed as an irritating material, and does not contain any explosive components. The irritating material gives off fumes that are extremely irritating to the eyes and mucous membranes when exposed to air or contact with fire. It may or may not be combustible.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

CHEMICAL KIT CORROSIVE MATERIAL 4936548 NA1760

Chemical kit is a package containing limited quantities of various corrosive materials. They are generally non-combustible and soluble in water with release of heat. They are corrosive to metals and tissue.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

CHEMICAL PLANT WASTE (COMBUSTIBLE LIQUID, N.O.S.) 4915560

COMBUSTIBLE LIQUID NA1993

Chemical plant waste, nec is a clear to variable colored liquid which may have a pleasant or unpleasant odor. It has a flash point of between 100 and 199 deg. F. It may be insoluble, partially soluble, or soluble in water. It may be heavier or lighter than water. Its vapors are heavier than air. Contact the shipper to determine the specific constituents and properties of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

Continued on next page

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

CHEMICAL PLANT WASTE, NEC (CORROSIVE LIQUID, N.O.S.) 4936538

CORROSIVE MATERIAL UN1760

Chemical plant waste, nec is a clear to variable colored liquid. It is usually soluble in water. It may burn though it may require some effort to ignite. It is corrosive to metals and tissue. Contact the shipper to determine the specific constituents and properties of this material.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
 Use dry chemical, carbon dioxide, or dry sand
 Do not use water on material itself
 If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
 Use water spray to absorb vapors
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 If contact with the material anticipated, wear full protective clothing

Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

CHEMICAL PLANT WASTE, NEC (POISONOUS LIQUID, N.O.S.) 4923370

POISON B NA2810

Chemical plant waste, nec is a variable colored liquid. It may or may not be water soluble. It may burn though it may require some effort to ignite. It is toxic by ingestion, inhalation (vapors, mist, etc.) or by skin absorption. Contact the shipper to determine the specific constituents and properties of this material.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear full protective clothing
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If material leaking (not on fire), downwind evacuation must be considered

CHEMICAL PLANT WASTE, NEC (FLAMMABLE LIQUID, N.O.S.) 4910560

FLAMMABLE LIQUID UN1993

Chemical plant waste, nec is a clear to variable colored liquid and may have a pleasant or unpleasant odor. It has a flash point of less than 100 deg. F. It may be insoluble, partially soluble, or soluble in water. It may be heavier or lighter than water. Its vapors are heavier than air. Contact the shipper to determine the specific constituents and properties of this material.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers

CHLORAL (CORROSIVE LIQUID, N.O.S.) 4935515

CORROSIVE MATERIAL UN1760

Chloral is a colorless oily liquid with a strong pungent odor. It is used to make chloral hydrate and ddt. It is heavier than water and is soluble in water. Its vapors are heavier than air. It is corrosive to tissue

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use water spray to absorb vapors

If material not involved in fire

Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Neutralize spilled material with crushed limestone, soda ash or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

CHLORATE AND BORATE MIXTURE OXIDIZER

4918719
UN1458

Chlorate and borate mixture is usually a white crystalline solid. It may only be partially soluble in water. It forms a very flammable mixture with combustible materials and this mixture may be explosive if the combustible material is very finely divided. The mixture can be ignited by friction. Contact with strong sulfuric acid can cause fires or explosions. When mixed with ammonium salts, spontaneous decomposition and ignition may result. Prolonged exposure of the material to fire or heat can result in an explosion.

If material on fire or involved in fire

- Flood with water
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 2500 feet

CHLORATE AND MAGNESIUM CHLORIDE MIXTURE OXIDIZER

4918720
UN1459

Chlorate and magnesium chloride mixture is a white crystalline solid. It is soluble in water. It forms a very flammable mixture with combustible materials and this mixture may be explosive if the combustible material is very finely divided. The mixture can be ignited by friction. Contact with strong sulfuric acid can cause fires or explosions. When mixed with ammonium salts, spontaneous decomposition and ignition may result. Prolonged exposure of the material to fire or heat can result in an explosion.

If material on fire or involved in fire

- Flood with water
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 2500 feet

CHLORATE OF POTASH (See POTASSIUM CHLORATE 4918722)

CHLORATE OF SODA (See SODIUM CHLORATE 4918723)

CHLORATE, N.O.S. OXIDIZER

4918721
UN1461

Chlorate, n.o.s. is a crystalline compound having the following properties. The material is soluble in water. It forms a very flammable mixture with combustible materials and this mixture may be explosive if the combustible material is finely divided. The mixture can be ignited by friction. Contact with strong sulfuric acid can cause fires or explosions. When mixed with ammonium salts, spontaneous decomposition and ignition may result. Prolonged exposure to fire or heat can result in an explosion.

If material on fire or involved in fire

- Flood with water
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 2500 feet

CHLORATE, N.O.S., WET OXIDIZER

4918610
NA1461

Chlorate, n.o.s., wet is a slurry or sludge of white crystalline compounds which have the following properties. The material is soluble in water. The material itself is noncombustible, but it can form a very flammable mixture with combustible materials, and this mixture may be explosive if the combustible material is very finely divided. The mixture can be ignited by friction. Contact with strong sulfuric acid can cause fires or explosions. When mixed with ammonium salts, spontaneous decomposition and ignition may result. Prolonged exposure of the material to heat or fire can result in an explosion.

If material on fire or involved in fire

- Flood with water
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 1500 feet

CHLORDANE, LIQUID 4909320
FLAMMABLE LIQUID NA2762
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Chlordane, liquid is the solution of chlordane, a clear colorless, odorless liquid in some solvent. It is used as an insecticide. It has a flash point of less than 100 deg. F. depending on the solvent and the concentration of chlordane; chlordane itself does not burn. It is generally heavier than water and insoluble in water. Its vapors are heavier than air.

It weighs 13.3 pounds per gallon.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Do not extinguish fire unless flow can be stopped
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents
- Apply "universal" gelling agent to immobilize spill

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Combustion products include corrosive or toxic vapors

CHLORDANE, LIQUID 4913170
COMBUSTIBLE LIQUID NA2762
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Chlordane, liquid is the solution of chlordane, a clear colorless, odorless liquid in a solvent. It has a flash point between 100 and 199 deg. F. It is generally heavier than water and insoluble in water. Its vapors are heavier than air.

It weighs 13.3 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents
- Apply "universal" gelling agent to immobilize spill

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Combustion products include corrosive or toxic vapors

CHLORIC ACID 4918206
OXIDIZER, CORROSIVE NA2626

Chloric acid is a colorless liquid. It is used as a reagent in chemical analysis and to make other chemicals. It will accelerate the burning of combustible materials and can ignite most on contact. It is corrosive to metals and tissue.

If material involved in fire

- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 1500 feet

CHLORINATED LIME, LIQUID (CORROSIVE LIQUID, N.O.S.) 4932332

CORROSIVE MATERIAL, ACIDIC UN1760

Chlorinated lime, liquid is the water solution of calcium chloride and calcium hypochlorite. It has an odor of chlorine. It is corrosive to metals and to tissue.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

CHLORINATED PHENOL PETROLEUM SOLUTION 4921494 (POISONOUS LIQUID, N.O.S.)

POISON B NA2810

Chlorinated phenol petroleum solution is a colorless to yellow liquid. It is insoluble in water and may or may not be combustible. It is toxic by inhalation and by skin absorption.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

CHLORINE 4904120 NONFLAMMABLE GAS, POISONOUS UN1017 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)

Chlorine is a greenish yellow gas with a pungent suffocating odor. It is used to purify water, bleach woodpulp, and to make other chemicals. It is toxic by inhalation. It is soluble in water. It reacts explosively or forms explosive compounds, with many common chemicals. It is normally shipped as a liquid in cylinders or tank cars. Contact with liquid should be avoided as it can cause frostbite. The liquid does readily vaporize to gas. The vapors are much heavier than air and tend to settle in low areas.

It weighs 13.0 pounds per gallon.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use water spray to absorb vapors

If material not involved in fire

- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Do not apply water to point of leak in tank car or container

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus

- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If material leaking (not on fire) evacuate for a radius of 2500 feet

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash or cement powder
- Neutralize with caustic soda or soda ash

Environmental considerations—water spill

- Add caustic soda
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Vapor knockdown water is corrosive or toxic and should be diked for containment

CHLORINE DIOXIDE HYDRATE, FROZEN 4918110 OXIDIZER, POISONOUS AND THERMALLY UNSTABLE NA9191

Chlorine dioxide hydrate, frozen is an orange colored solid, appearing as a block of ice, with a faint odor of chlorine. It is used to bleach wood pulp, fats and oils; in processing flour, and for water purification. It may only be shipped in the frozen state and then only by private or contract motor carrier. The melting point of the hydrate is around 30 deg. F. If it should thaw and further warm up, chlorine dioxide gas is given off. The gas is toxic by inhalation. The gas and liquid are violently decomposed by organic materials. The gas will decompose explosively at temperatures below the boiling point of water.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not on fire and not involved in fire

- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing vapors
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 1500 feet

CHLORINE TRIFLUORIDE 4918210 OXIDIZER, POISONOUS, CORROSIVE UN1749

Chlorine trifluoride is a colorless gas or green liquid with a pungent odor. It becomes a gas at 53 deg. F. It reacts with water to form chlorine and hydrofluoric acid with release of heat. Contact with organic materials may result in spontaneous ignition. It may only be shipped in cylinders not equipped with safety relief devices. It is corrosive to metals and tissue. Prolonged exposure of the cylinders to fire can result in their violent rupturing and rocketing

Continued on next page

If material involved in fire

- Do not use water on material itself
- Use dry chemical or carbon dioxide
- Cool all affected containers with flooding quantities of water
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors

If material not involved in fire

- Keep material out of water sources and sewers
- Do not use water on material itself
- Use water spray to knock-down vapors
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

4-CHLORO-O-TOLUIDINE HYDROCHLORIDE**4921412****POISON B****UN1579**

4-chloro-o-toluidine hydrochloride is a white crystalline solid. It is soluble in water. It is toxic by skin absorption and inhalation (dust).

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing vapors or dusts
- Keep upwind
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

CHLOROACETIC ACID, SOLID**4931416****CORROSIVE MATERIAL, ACIDIC****UN1751**

Chloroacetic acid, solid is a colorless to light-brown crystalline solid. It absorbs moisture from air and forms a syrup. It is soluble in water, it is corrosive to metals and tissue

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep material out of water sources and sewers
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

CHLOROACETOPHENONE, GAS, LIQUID OR SOLID**4925220****IRRITATING MATERIAL****UN1697**

Chloroacetophenone is in the form of colorless to white crystals. The vapor of the material is very irritating to the eyes and mucous membranes.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Use "alcohol" foam, carbon dioxide or dry chemical
- Cool all affected containers with flooding quantities of water
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

CHLOROACETYL CHLORIDE**4931210****CORROSIVE MATERIAL, ACIDIC, POISONOUS****UN1752**

Chloroacetyl chloride is a colorless to light yellow liquid with a pungent odor. It is decomposed by water to chloroacetic and hydrochloric acids. These and the material itself are corrosive to metals and tissue.

If material involved in fire

- Use dry chemical or carbon dioxide
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

CHLOROBENZOL (OR) CHLOROBENZENE 4909153
FLAMMABLE LIQUID UN1134
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Chlorobenzol is a clear colorless liquid with an almond-like odor. It has a flash point of 66 deg. F. It is heavier than water and slightly soluble in water. Its vapors are heavier than air. It weighs 9.2 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents
- Apply "universal" gelling agent to immobilize spill
- Apply fluorocarbon-water foam to diminish vapor and fire hazard

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Remove trapped material with suction hoses
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Combustion products include corrosive or toxic vapors

P-CHLOROBENZOYL PEROXIDE 4919120
ORGANIC PEROXIDE UN2113

P-chlorobenzoyl peroxide is a white granular solid. It is easily ignited and burns very rapidly. It strongly supports the burning of combustible materials. It can form explosive mixtures with finely divided combustible materials. Under prolonged exposure to fire or heat containers of the material can explode

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

P-CHLOROBENZOYL PEROXIDE, (NOT MORE THAN 52% AS A PASTE) THAN 52% WITH INERT SOLID) 4919219

ORGANIC PEROXIDE UN2114

3,3,6,6,9,9-hexamethyl-1,2,4,5-tetraoxocyclononane, (not more than 52% solid. It is used to manufacture paints, plastics, and rubber. It is plastics, and rubber. It is insoluble in water. It is easily ignited and as the fire progresses. It can form explosive mixtures with finely divided mixtures with finely divided combustible materials. It supports the burning under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

P-CHLOROBENZOYL PEROXIDE, (NOT MORE THAN 75% WITH WATER) 4919218

ORGANIC PEROXIDE UN2113

P-chlorobenzoyl peroxide, (not more than 75% with water) is a white solid, it is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

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If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

CHLOROFORM (CHLOROFORM, TRICHLORMETHANE), NEC, OTHER THAN TECHNICAL GRADE)

4940310

ORM-A UN1888 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Chloroform is a clear colorless heavy liquid with a characteristic odor. It is used as a solvent, to make other chemicals, as fumigant, and for other uses. It is heavier than water and slightly soluble in water. It is nonflammable under most conditions, but it will burn under extreme fire conditions. It can cause illness by inhalation, skin absorption and/or ingestion.

It weighs 12.3 pounds per gallon.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder
Apply "universal" gelling agent to immobilize spill

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
Remove trapped material with suction hoses
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Combustion products include corrosive or toxic vapors
Thermal decomposition to phosgene can occur

CHLOROFORM (CHLOROFORM, NEC, TECHNICAL GRADE (TRICHLOROMETHANE))

4940311

ORM-A

UN1888

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Chloroform is a clear colorless heavy liquid with a characteristic odor. It is used as a solvent, to make other chemicals, as fumigant, and for other uses. It is heavier than water and slightly soluble in water. It is nonflammable under most conditions, but it will burn under extreme fire conditions. It can cause illness by inhalation, skin absorption and/or ingestion.

It weighs 12.3 pounds per gallon.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder
Apply "universal" gelling agent to immobilize spill

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom

Remove trapped material with suction hoses
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Combustion products include corrosive or toxic vapors
Thermal decomposition to phosgene can occur

CHLOROPENTANES (COMBUSTIBLE LIQUID, N.O.S.) COMBUSTIBLE LIQUID

4913136

NA1993

Chloropentanes are clear colorless to pale yellow liquids. They have a flash point between 100 and 199 deg. F. They are lighter than water and insoluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

**CHLOROPENTANES (FLAMMABLE LIQUID, N.O.S.) 4909136
FLAMMABLE LIQUID UN1993**

Chloropentanes are clear colorless to yellow liquids. Their flash point is in the range of 54 to 99 deg. F. They are lighter than water and insoluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

3-CHLOROPEROXYBENZOIC ACID, (NOT MORE THAN 86% WITH 3-CHLOROBENZOIC ACID) 4919223

ORGANIC PEROXIDE UN2755

3-chloroperoxybenzoic acid, (not more than 86% with 3-chlorobenzoic acid) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**CHLOROPHENYL TRICHLOROSILANE 4934220
CORROSIVE MATERIAL, ACIDIC UN1753**

Chlorophenyl trichlorosilane is a colorless to pale yellow liquid with a pungent odor. The material will burn though it may take some effort to ignite. It is decomposed by moisture or water to hydrochloric acid with evolution of heat. It is corrosive to metals and tissue.

If material on fire or involved in fire

- Use dry chemical, carbon dioxide, or dry sand
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

**CHLOROPICRIN AND METHYL CHLORIDE MIXTURE 4920105
POISON A, FLAMMABLE UN1582**

Chloropicrin and methyl chloride mixture is a colorless gas with an intense, penetrating odor. It is shipped as a liquefied gas under its vapor pressure. Methyl chloride is a flammable gas and chloropicrin is non-combustible. The mixture can separate with the chloropicrin settling into low areas. Chloropicrin is very irritating to all body surfaces and is toxic by inhalation. It may only be shipped in cylinders and these may be overpacked in wooden boxes. Prolonged exposure to fire or heat may cause the cylinders to violently rupture and rocket.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If material leaking (not on fire), downwind evacuation must be considered

**CHLOROPICRIN MIXTURE (CONTAINING NO
COMPRESSED GAS OR POISON A LIQUID)
POISON B**

4921416

UN1583

Chloropicrin mixture is a variable colored liquid usually colorless to yellow. Chloropicrin is non-combustible and the flammability of the mixture will depend on the other component of the mixture. Chloropicrin vapors are heavier than air and it is toxic by inhalation. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog
Use "alcohol" foam, carbon dioxide or dry chemical
Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If material leaking (not on fire), downwind evacuation must be considered

**CHLOROPICRIN, ABSORBED
POISON B**

4921415

NA1583

Chloropicrin, absorbed is a liquid chloropicrin absorbed on a dry carrier. The strong odor of chloropicrin may or may not be present. The carrier usually is not soluble in water and is non-combustible. Chloropicrin is slightly soluble in water and is non-combustible. Vapors of chloropicrin are heavier than air and it is toxic by inhalation. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog
Use "alcohol" foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing vapors or dusts
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**CHLOROPICRIN, LIQUID
POISON B**

4921414

UN1580

Chloropicrin, liquid is a colorless to yellow liquid with a strong odor. It is slightly soluble in water and is non-combustible. Its vapors are heavier than air and it is toxic by inhalation. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog
Use "alcohol" foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If material leaking (not on fire), downwind evacuation must be considered

**CHLOROPRENE, INHIBITED
FLAMMABLE LIQUID
POLYMERIZABLE**

4907223

UN1991

Chloroprene is a clear colorless liquid. It is used to make neoprene rubber. It has a flash point of -4 deg. F. If subject to heat it may polymerize, with evolution of additional heat. If the polymerization takes place in a container, the container is subject to possible rupture. It is heavier than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
If material leaking (not on fire), downwind evacuation must be considered

**2-CHLOROPROPENE
FLAMMABLE LIQUID**

4908128

UN2456

2-chloropropene is a clear colorless volatile liquid. It has a flash point of -4 deg. F. and a boiling point of 73 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

CHLOROSULFONIC ACID 4930204
CORROSIVE MATERIAL, ACIDIC UN1754
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Chlorosulfonic acid is a colorless to yellow colored fuming liquid with a pungent odor. It is decomposed by water to give hydrochloric and sulfuric acids with release of heat. It is corrosive to metals and tissue. It weighs 14.7 pounds per gallon.

If material involved in fire

- Do not use water on material itself
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash or cement powder
- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
- Dilute slowly with water

Environmental considerations—water spill

- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Vapor knockdown water is corrosive or toxic and should be diked for containment

CHLOROSULFONIC ACID-SULFUR TRIOXIDE 4930205
MIXTURE

CORROSIVE MATERIAL, ACIDIC UN1754
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Chlorosulfonic acid-sulfur trioxide mixture is a colorless to yellow fuming liquid with a pungent odor. It is decomposed by water into hydrochloric and sulfuric acid with release of heat. It is corrosive to metals and skin.

It weighs 14.7 pounds per gallon.

If material involved in fire

- Do not use water on material itself
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash or cement powder
- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
- Dilute slowly with water

Environmental considerations—water spill

- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Vapor knockdown water is corrosive or toxic and should be diked for containment

CHLORPICRIN AND NONFLAMMABLE, 4920505
NONLIQUEFIED COMPRESSED GAS MIXTURE
POISON A NA1955

Chlorpicrin and nonflammable, nonliquefied compressed gas is a colorless gas with an intense penetrating odor. It is toxic by inhalation (vapor) and ingestion. It may only be shipped in cylinders. Its vapors are heavier than air. Prolonged exposure of the cylinder to fire or heat may result in the violent rupturing and rocketing of the cylinder.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

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Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear full protective clothing
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If material leaking (not on fire), downwind evacuation must be considered

CHLORPYRIFOS (AGRICULTURAL INSECTICIDES, NEC, LIQUID) 4941123

ORM-A NA2783 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Chlorpyrifos is a white crystalline solid dissolved in a liquid carrier. It is used as a herbicide. It is a water emulsifiable liquid. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
 Build dikes to contain flow as necessary

Personnel protection

Keep upwind
 Wear boots, protective gloves, and goggles
 Avoid breathing vapors or dusts
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
 Remove trapped material with suction hoses
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CHLORPYRIFOS (AGRICULTURAL INSECTICIDES, NEC, OTHER THAN LIQUID) 4941124

ORM-A NA2783 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Chlorpyrifos is a white crystalline solid. It is used as a herbicide. It is a wettable powder. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
 Build dikes to contain flow as necessary

Personnel protection

Keep upwind
 Wear boots, protective gloves, and goggles
 Avoid breathing vapors or dusts
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Remove trapped material with suction hoses

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CHLORPYRIFOS (INSECTICIDES, OTHER THAN AGRICULTURAL, NEC) 4941125

ORM-A NA2783 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Chlorpyrifos is a white crystalline solid or the solid dissolved in a liquid carrier. It is used as a herbicide. It is a wettable powder or water emulsifiable liquid. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
 Build dikes to contain flow as necessary

Personnel protection

Keep upwind
 Wear boots, protective gloves, and goggles
 Avoid breathing vapors or dusts
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Remove trapped material with suction hoses

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CHROME CHLORIDE SOLUTION (CHROMOUS CHLORIDE) 4963324

ORM-E NA9102 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Chrome chloride solution is the white crystalline solid dissolved in water. It is used to make other chemicals. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
 Build dikes to contain flow as necessary

Personnel protection

Keep upwind
 Wear boots, protective gloves, and goggles
 Avoid breathing vapors or dusts
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Apply "universal" gelling agent to immobilize spill

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CHROME CHLORIDE SOLUTION (CORROSIVE LIQUID, N.O.S.) 4932338**CORROSIVE MATERIAL, ACIDIC UN1760**

Chrome chloride solution is the blue or green colored crystals dissolved in water. The solution is corrosive to metals.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

CHROME SULPHATE SOLUTION (CHROMIC SULFATE) 4963319**ORM-E NA9100 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)**

Chrome sulphate solution is the dark green to violet crystalline material dissolved in water. It is used in paints and inks, ceramics, and in textile dyeing. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Keep upwind

Wear boots, protective gloves, and goggles

Avoid breathing vapors or dusts

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents

Apply "universal" gelling agent to immobilize spill

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Adjust ph to neutral (ph-7)

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CHROMIC ACETATE

4963312

ORM-E

NA9101

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Chromic acetate is a greyish green to bluish green powder. It is used in tanning and in textile dyeing. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Keep upwind

Wear boots, protective gloves, and goggles

Avoid breathing vapors or dusts

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Adjust ph to neutral (ph-7)

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CHROMIC ACID MIXTURE, DRY OXIDIZER, CORROSIVE

4918511

NA1463

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Chromic acid mixture, dry is the mixture of the dark purplish red solid and other solid chemicals. The chromic acid is soluble in water with release of heat. The other materials may or may not be soluble in water. The material itself is noncombustible but it will accelerate the burning of combustible materials. Its solution is corrosive to metals and tissue.

If material on fire or involved in fire

Flood with water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing dusts

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

Approach fire with caution

Continued on next page

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**CHROMIC ACID SOLUTION
CORROSIVE MATERIAL, ACIDIC
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)****4930206****UN1755**

Chromic acid solution is a dark red colored liquid. It is soluble in water. It is corrosive to metals and tissue. It can react with combustible materials and the heat of this reaction may be sufficient to result in the ignition of the combustible material.

It weighs 13.9 pounds per gallon.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Adjust pH to neutral (pH-7)

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Vapor knockdown water is corrosive or toxic and should be diked for containment

**CHROMIC ACID, SOLID
OXIDIZER, CORROSIVE
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)****4918510****NA1463**

Chromic acid is a dark purplish red solid. It is soluble in water to form a corrosive solution. The material itself is noncombustible but it will accelerate the burning of combustible materials. Sufficient heat may be generated from the reaction with combustible materials to ignite the mass. Prolonged exposure to fire or heat can cause containers of the material to explode.

If material on fire or involved in fire

Flood with water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing dusts

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Approach fire with caution

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**CHROMIC ANHYDRIDE (See CHROMIC ACID, SOLID
4918510)****CHROMIC FLUORIDE SOLUTION
CORROSIVE MATERIAL, ACIDIC****4932340****UN1757**

Chromic fluoride solution is the green crystalline solid dissolved in water. It is corrosive to metals and tissue.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Avoid breathing fumes from burning material

If contact with the material anticipated, wear full protective clothing

**CHROMIC FLUORIDE, SOLID
CORROSIVE MATERIAL****4932339****UN1756**

Chromic fluoride, solid is a green crystalline solid. It is soluble in water. It is corrosive to tissue.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

CHROMIC SULFATE 4963314
ORM-E NA9100
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Chromic sulfate is a dark green to violet solid. It is used in ceramics, as a pigment for paint, and in textile dyeing. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Adjust pH to neutral (pH-7)
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CHROMIC TRIOXIDE (See CHROMIC ACID, SOLID
4918510)

CHROMIUM RESINATE (FLAMMABLE SOLID, N.O.S.) 4916765
FLAMMABLE SOLID UN1325

Chromium resinate is a green to violet amorphous powder. It may spontaneously heat in the presence of air or moisture. This heat may be sufficient to ignite surrounding combustible materials.

If material on fire or involved in fire

Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

CHROMIUM SULPHATE, BASIC, DRY (CHROMIC 4963317
SULFATE)
ORM-E NA9100
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Chromium sulphate, basic, dry is a green solid. It is used in leather tanning. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Adjust pH to neutral (pH-7)
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CHROMOUS CHLORIDE 4963322
ORM-E NA9102
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Chromous chloride is a white crystalline solid. It is used to make other chemicals and as an oxygen absorbent. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CHROMYL CHLORIDE (OR) CHROMIUM 4930203
OXYCHLORIDE
CORROSIVE MATERIAL, ACIDIC UN1758

Chromyl chloride is a dark red colored fuming liquid with a pungent odor. It is decomposed by water to chromic acid, hydrochloric acid, and some chlorine with release of heat.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

Continued on next page

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

**CIGARETTE LIGHTER
FLAMMABLE GAS****4905726
UN1057**

Cigarette lighter consists of a small device charged with a flammable gas, usually butane and equipped with an ignition device. The lighters continually leak very small amounts of gas and therefore may not be shipped in airtight containers.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Approach fire with caution

**CIGARETTE LIGHTER
FLAMMABLE LIQUID****4910425
UN1226**

Cigarette lighter is a small device containing a flammable liquid fuel in a reservoir with or without absorbent packing. The fuel has a flash point of less than 100 deg. F. It is lighter than water and insoluble in water. The vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**CIGARETTE LOADS
CLASS C EXPLOSIVE****4903510**

Cigarette load consist of wooden pegs to which are affixed a small amount of explosive composition.

If material on fire or involved in fire

- Flood with water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Approach fire with caution
- Avoid breathing dusts, and fumes from burning material
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 1500 feet

**CLEANING COMPOUND, IRON OR STEEL, LIQUID
(COMPOUND, CLEANING, LIQUID)****4936516****CORROSIVE MATERIAL****NA1760**

Cleaning compounds, iron or steel, nec. liquid are various colored liquids. They are water soluble and are corrosive to metals and/or tissue.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

**CLEANING COMPOUNDS, IRON OR STEEL, DRY
(CORROSIVE SOLID, N.O.S.)****4936517****CORROSIVE MATERIAL****UN1759**

Cleaning compounds, iron or steel, dry are various colored solids. They are water soluble and are corrosive to metals and/or tissue.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers

Personnel protection

- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

**COAL BRIQUETTE BINDER (COMBUSTIBLE LIQUID,
N.O.S.)****4915510****COMBUSTIBLE LIQUID****NA1993**

Coal briquette binder is a dark colored liquid with a petroleum like odor. It has a flash point between 100 and 199 deg. F. It is generally heavier than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

COAL BRIQUETTE BINDER (FLAMMABLE LIQUID, N.O.S.) 4910510

FLAMMABLE LIQUID UN1993

Coal briquette binder is a dark colored liquid with a petroleum like odor. It has a flash point of less than 100 deg. F. It is generally heavier than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

COAL SPRAYING OIL, PETROLEUM (PETROLEUM OIL, N.O.S.) 4910361

FLAMMABLE LIQUID NA1270

Coal spraying oil, petroleum is a dark colored liquid with a characteristic odor. It has a flash point of less than 100 deg. F. It is generally lighter than water and is insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

COAL SPRAYING OIL, PETROLEUM (PETROLEUM OIL, N.O.S.) 4915361

COMBUSTIBLE LIQUID NA1993

Coal spraying oil, petroleum is a dark colored liquid with a characteristic odor. It has a flash point between 100 and 199 deg. F. It is generally lighter than water and is insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

COAL TAR DISTILLATE 4910133
FLAMMABLE LIQUID UN1136

Coal tar distillate is a clear colorless to dark brownish colored liquid with an aromatic odor. It has a flash point of less than 100 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

COAL TAR DISTILLATE 4915133
COMBUSTIBLE LIQUID UN1137

Coal tar distillate is a clear colorless to dark brownish colored liquid with an aromatic odor. It has a flash point between 100 and 199 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

COAL TAR DYE, LIQUID 4936510
CORROSIVE MATERIAL NA2801

Coal tar dye, liquid are various colored liquids or solutions of solids. They are combustible though it may require some effort to ignite them. They are corrosive to metals and/or tissue.

If material on fire or involved in fire

- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

COAL TAR FIBRE SATURANT LIQUID (FLAMMABLE 4910511
LIQUID, N.O.S.)
FLAMMABLE LIQUID UN1993

Coal tar fiber saturant liquid is a dark colored liquid. It has a flash point of less than 100 deg. F. It is generally heavier than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

COAL TAR FIBRE SATURANT, LIQUID 4915511
(COMBUSTIBLE LIQUID, N.O.S.)
COMBUSTIBLE LIQUID NA1993

Coal tar fibre saturant, liquid is a dark colored liquid. It has a flash point between 100 and 199 deg. F. It is generally heavier than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

COAL TAR LIGHT OIL 4910134
FLAMMABLE LIQUID NA1136

Coal tar light oil is a clear colorless to dark brownish colored liquid with an aromatic odor. It has a flash point of less than 100 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**COAL TAR LIGHT OIL
COMBUSTIBLE LIQUID**

**4915134
NA1137**

Coal tar light oil is a clear colorless to dark brownish colored liquid with an aromatic odor. It has a flash point between 100 and 199 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**COAL TAR LIGHT OIL (CRUDE LIGHT OIL OF COAL
TAR)**

4910135

FLAMMABLE LIQUID

NA1136

Coal tar light oil (crude light oil of coal tar) is a clear colorless to dark brownish colored liquid with an aromatic odor. It has a flash point of less than 100 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**COAL TAR LIGHT OIL (CRUDE LIGHT OIL OF COAL
TAR)**

4915135

COMBUSTIBLE LIQUID

NA1137

Coal tar light oil (crude light oil of coal tar) is a clear colorless to dark brownish colored liquid with an aromatic odor. It has a flash point between 100 and 199 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**COAL TAR NAPHTHA
FLAMMABLE LIQUID**

**4910136
NA2553**

Coal tar naphtha is a clear colorless to dark brownish colored liquid with an aromatic odor. It has a flash point of less than 100 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**COAL TAR NAPHTHA
COMBUSTIBLE LIQUID**

**4915136
NA2553**

Coal tar naphtha is a clear colorless to dark brownish colored liquid with an aromatic odor. It has a flash point between 100 and 199 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**COAL TAR NAPHTHA (COAL TAR NAPHTHA, CRUDE) 910137
FLAMMABLE LIQUID NA2553**

Coal tar naphtha, crude is a clear colorless to dark brownish colored liquid with an aromatic odor. It has a flash point of less than 100 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**COAL TAR NAPHTHA (COAL TAR NAPHTHA, CRUDE) 4915137
COMBUSTIBLE LIQUID NA2553**

Coal tar naphtha, crude is a clear colorless to dark brownish colored liquid with an aromatic odor. It has a flash point between 100 and 199 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**COAL TAR NAPHTHA AND LIGHT OIL OF COAL TAR, 4915512
CRUDE (COMBUSTIBLE LIQUID, N.O.S.) NA1993**

Coal tar naphtha and light oil of coal tar, crude is a clear colorless to dark colored liquid with a petroleum like odor. It has a flash point between 100 and 199 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**COAL TAR NAPHTHA AND LIGHT OIL OF COAL TAR, 4910512
CRUDE (FLAMMABLE LIQUID, N.O.S.) UN1993**

Coal tar naphtha and light oil of coal tar, crude is a clear colorless to dark colored liquid with a petroleum like odor. It has a flash point of less than 100 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**COAL TAR OIL 4910138
FLAMMABLE LIQUID NA1136**

Coal tar oil is a clear colorless to dark brownish colored liquid with an aromatic odor. It has a flash point of less than 100 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

COAL TAR OIL 4915138
COMBUSTIBLE LIQUID NA1137

Coal tar oil is a clear colorless to dark brownish colored liquid with an aromatic odor. It has a flash point between 100 and 199 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

COAL TAR OIL (COAL TAR OIL, CRUDE, NEC) 4910139
FLAMMABLE LIQUID NA1136

Coal tar oil, crude, nec is a clear colorless to dark brownish colored liquid with an aromatic odor. It has a flash point of less than 100 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

COAL TAR OIL (COAL TAR OIL, CRUDE, NEC) 4915139
COMBUSTIBLE LIQUID NA1137

Coal tar, oil, crude, nec is a clear colorless to dark brownish colored liquid with an aromatic odor. It has a flash point between 100 and 199 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

COAL TAR OIL, CRUDE, NEC (CORROSIVE LIQUID, N.O.S.) 4931412

CORROSIVE MATERIAL, ACIDIC UN1760

Coal tar oil, crude, nec, is a dark colored liquid with a creosote odor. It is combustible though it may take some effort to ignite. It is lighter than water and is partially soluble in water. It is corrosive to tissue.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

COAL TAR OIL, CRUDE, NEC (CORROSIVE SOLID, N.O.S.) 4931413

CORROSIVE MATERIAL, ACIDIC UN1759

Coal tar oil, crude, nec, is a dark colored solid with a creosote odor. It is combustible. It is heavier than water and is partially soluble in water. It is corrosive to tissue.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

COAL TREATING COMPOUNDS, OTHER THAN PETROLEUM, NEC, LIQUID (COMBUSTIBLE LIQUID) 4915330

COMBUSTIBLE LIQUID NA1993

Coal treating compounds, other than petroleum, nec, liquid are variable colored liquids. They have a flash point between 100 and 199 deg. F. They are generally insoluble in water and heavier than water. Their vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

COAL TREATING COMPOUNDS, OTHER THAN PETROLEUM, NEC, LIQUID (FLAMMABLE LIQUID, N.O.S.) 4910330

FLAMMABLE LIQUID UN1993

Coal treating compounds, other than petroleum, nec, liquid are variable colored liquids. They have a flash point of less than 100 deg. F. They are generally insoluble in water and heavier than water. Their vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

COAL, GROUND BITUMINOUS, SEA COAL, COAL FACINGS, ETC. 4917307

FLAMMABLE SOLID NA1361

Coal, ground bituminous is powdered coal. It must be stored for six days after grinding, else it must be shipped in tight metal containers or cars. If not stored it is liable to spontaneous heating and ignition.

If material on fire or involved in fire

- Use dry chemical or carbon dioxide
- Use water only if flooding quantities are available

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material dry

COATING SOLUTION FLAMMABLE LIQUID

4910142
UN1139

Coating solution is a solution of various gums and resins in various solvents. The liquids are generally quite thick and may range from clear colorless to black "tar". The flash point depends on the solvent used but it will be less than 100 deg. F.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

COBALT RESINATE, PRECIPITATED FLAMMABLE SOLID

4916705
UN1318

Cobalt resinate, precipitated is a reddish brown powder. It is used a drier in paints. If it comes in contact with air, spontaneous heating may result. This heat may be sufficient to ignite the material itself or surrounding combustible material. It is insoluble in water.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

COBALTOUS BROMIDE ORM-E

4963710
NA9103

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Cobaltous bromide is a red violet crystalline solid. It is used as a catalyst in the production of other chemicals. It is soluble in water. It is non-combustible.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Adjust pH to neutral (pH-7)
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

COBALTOUS FORMATE

4963327

ORM-E

NA9104

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Cobaltous formate is a red crystalline solid. It is used to make catalysts for use in chemical manufacture. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire
lighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Adjust pH to neutral (pH-7)
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

COBALTOUS SULFAMATE

4963329

ORM-E

NA9105

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Cobaltous sulfamate is a. It is used for electroplating metals. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire
lighting water

Environmental considerations—water spill

Add calcium hypochlorite
Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Adjust pH to neutral (pH-7)
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**COCCULUS, SOLID
POISON B**4921418
UN1584

Cocculus, solid is a dried fruit. It is toxic by ingestion.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

**COCOA BEAN SHELLS, (FLAMMABLE SOLID, N.O.S.) 4917387
FLAMMABLE SOLID UN1325**

Cocoa bean shells are in the form of brown "leaves" or "flakes". If the shells are not cooled after processing, or dried too much, or appreciable oil is left behind in processing, they are liable to spontaneous heating and ignition.

If material on fire or involved in fire

Flood with water

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

**COLLIDIENE (COMBUSTIBLE LIQUID, N.O.S.) 4913173
COMBUSTIBLE LIQUID NA1993**

Collidiene is a clear colorless liquid. It is used to make other chemicals. It has a flash point of 135 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

**COLLODION
FLAMMABLE LIQUID**

**4910144
NA2059**

Collodion is a solution of nitrocellulose in a mixture of ether and ethyl alcohol. Its flash point may vary but it is well below 100 deg. F. The film deposited by the evaporation of the solvent is easily ignited and once ignited burns with great rapidity. If the fire is confined, and large quantities of material are involved, an explosion may result.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

**COMBINATION FUZE
CLASS C EXPLOSIVE**

4903205

Combination fuze is a device used for detonating the bursting charge of a projectile. It has both a percussion mechanism and a time delay mechanism.

If material on fire or involved in fire

- Flood with water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Approach fire with caution
- Avoid breathing dusts, and fumes from burning material
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 1500 feet

**COMBINATION PRIMER
CLASS C EXPLOSIVE**

4903210

Combination primer is a device employing both a percussion element and an electrical element either of which can be used to make the device function.

If material on fire or involved in fire

- Flood with water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Approach fire with caution
- Avoid breathing dusts, and fumes from burning material
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 1500 feet

**COMBUSTIBLE LIQUID, N.O.S.
COMBUSTIBLE LIQUID**

**4915185
NA1993**

Combustible liquid, n.o.s. is the proper shipping name for those materials having a closed cup flash point between 100 and 199 deg. F. and not specifically mentioned in the hazardous materials regulations.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

**COMMON FIREWORKS
CLASS C EXPLOSIVE**

4903520

Common fireworks are fireworks devices suitable for use by the public and designed primarily to produce visible effects by combustion. Some small devices designed to produce audible effects are also included in this description.

If material on fire or involved in fire

- Flood with water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Approach fire with caution
- Avoid breathing dusts, and fumes from burning material
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 1500 feet

**COMPOUND, CLEANING, LIQUID
CORROSIVE MATERIAL**

**4936515
NA1760**

Compound, cleaning, liquid is a variable colored liquid. The compound is generally water soluble. It is corrosive to metals and/or tissue.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

- Use water in flooding quantities as fog
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

COMPOUND, CLEANING, LIQUID FLAMMABLE LIQUID

4910147
NA1993

Compound, cleaning, liquid is a variable colored liquid with a petroleumlike odor. It has a flash point of less than 100 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

COMPOUND, CLEANING, LIQUID COMBUSTIBLE LIQUID

4915147
NA1993

Compound, cleaning, liquid is a variable colored liquid with a petroleum like odor. It has a flash point between 100 and 199 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

COMPOUND, CLEANING, LIQUID (CONTAINING HYDROCHLORIC (MURIATIC) ACID) CORROSIVE MATERIAL, ACIDIC

4930209

NA1789

Compound, cleaning, liquid (containing hydrochloric (muriatic) acid) are various colored liquids with a pungent odor. It is soluble in water with release of some heat. It is corrosive to metals and/or tissue.

If material on fire or involved in fire

- Do not use water on material itself
- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use foam, carbon dioxide or dry chemical
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

COMPOUND, CLEANING, LIQUID (CONTAINING HYDROFLUORIC ACID) CORROSIVE MATERIAL, ACIDIC

4930210

NA1790

Compound, cleaning, liquid (containing hydrofluoric acid) are various colored liquids with a pungent odor. They are soluble in water with the release of some heat. They are corrosive to metals and/or tissue. Skin contact with fumes or small quantities of material for short periods of time can cause severe painful burns.

If material on fire or involved in fire

- Do not use water on material itself
- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use foam, carbon dioxide or dry chemical
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

COMPOUND, CLEANING, LIQUID (CONTAINING PHOSPHORIC OR ACETIC ACIDS) CORROSIVE MATERIAL, ACIDIC

4936520

NA1760

Compound, cleaning, liquid (containing phosphoric or acetic acids) are various colored liquids, generally odorless if containing phosphoric acid and having a vinegar like odor, if containing acetic acid. They are soluble in water with evolution of heat. They are corrosive to metals and tissue.

Continued on next page

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with
copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

COMPOUND, CLEANING, LIQUID (CONTAINING SODIUM OR POTASSIUM HYDROXIDE) 4936521**CORROSIVE MATERIAL, BASIC NA1760**

Compound, cleaning, liquid (containing sodium or potassium hydroxide) are various colored liquids. They are soluble in water with evolution of heat. They are corrosive to metals and tissue.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with
copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

COMPOUND, ENAMEL 4910150
FLAMMABLE LIQUID NA1263

Compound, enamel is a variable colored "paint" like liquid. It has a flash point of less than 100 deg. F. It is usually lighter than water and is insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with
copious amounts of water or soap and water

COMPOUND, LACQUER, PAINT OR VARNISH 4936535
REMOVING LIQUID**CORROSIVE MATERIAL, BASIC, COMBUSTIBLE NA1760**

Compounds, lacquer, paint or varnish removing liquid are various colored materials. They are corrosive to metals and/or tissue.

If material on fire or involved in fire

Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Solid streams of water may be ineffective
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with
copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

COMPOUND, LACQUER, PAINT, OR VARNISH, 4915153
REMOVING, REDUCING OR THINNING**COMBUSTIBLE LIQUID NA1142**

Compound, lacquer, paint, or varnish, removing, reducing or thinning are generally clear colorless liquids. Their flash point is between 100 and 199 deg. F. Most of these compounds are lighter than water and insoluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with
copious amounts of water or soap and water

COMPOUND, LACQUER, PAINT, OR VARNISH, 4910153
REMOVING, REDUCING OR THINNING, NA1142
FLAMMABLE LIQUID

Compound, lacquer, paint, or varnish, removing, reducing or thinning are generally clear colorless liquids. Their flash point is less than 100 deg. F. Most of these compounds are lighter than water and insoluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**COMPOUND, POLISHING, LIQUID
FLAMMABLE LIQUID****4910155
NA1142**

Compound, polishing, liquid is usually a variable colored liquid containing an undissolved solid. It has a flash point of less than 100 deg. F. It is lighter than water and generally insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**COMPOUND, TREE (OR) WEED KILLING, LIQUID
CORROSIVE MATERIAL****4936532
NA1760**

Compound, tree (or) weed killing, liquid is a variable colored liquid. It may either be a solution of solid material in a liquid or a simple liquid or mixture of liquids. It may be combustible though requiring some effort to ignite. It is usually soluble in water. It is corrosive to metals and or tissue.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Solid streams of water may be ineffective
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

**COMPOUND, TREE OR WEED KILLING, LIQUID
FLAMMABLE LIQUID****4910157
NA1993**

Compound, tree or weed killing, liquid is a variable colored liquid. It has a flash point of less than 100 deg. F. Most of these materials are lighter than water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**COMPOUND, TREE OR WEED KILLING, LIQUID
COMBUSTIBLE LIQUID****4915157
NA1993**

Compound, tree or weed killing, liquid is a variable colored liquid. It has a flash point between 100 and 199 deg. F. Most of these materials are lighter than water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

COMPOUND, TREE OR WEED KILLINGS, SOLID OXIDIZER 4918405
NA1479

Compound, tree or weed killing, solid are various solid materials. They may or may not burn, but if mixed with combustible materials they will accelerate their burning. Prolonged exposure of these materials and or their containers to fire or heat may result in an explosion.

If material on fire or involved in fire

- Flood with water
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 1500 feet

COMPOUND, VULCANIZING, LIQUID FLAMMABLE LIQUID 4910162
NA1142

Compound, vulcanizing, liquid is a variable colored liquid. It has a flash point of less than 100 deg. F. The hazard of this material is flammability.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

COMPOUND, VULCANIZING, LIQUID CORROSIVE MATERIAL 4936534
NA1760

Compound, vulcanizing, liquid are various colored materials. They are corrosive to metals and/or tissue.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

COMPOUNDS CAULKING OR GLAZING (COMBUSTIBLE LIQUID, N.O.S.) COMBUSTIBLE LIQUID 4915450
NA1993

Compounds caulking or glazing are materials containing a solvent having a closed cup flash point between 100 and 199 deg. F. The hazard of these materials is combustibility.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

COMPOUNDS CAULKING OR GLAZING (FLAMMABLE LIQUID, N.O.S.) FLAMMABLE LIQUID 4910450
UN1993

Compounds caulking or glazing are materials containing a solvent having a closed cup flash point of less than 100 deg. F. The hazard of these materials is flammability.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

COMPOUNDS GAS PURIFYING (FLAMMABLE SOLID, N.O.S.) FLAMMABLE SOLID 4917396
UN1325

Compounds gas purifying are various colored solid materials having the property of being readily ignited by external sparks or flame and when so ignited burns vigorously and persistently.

If material on fire or involved in fire

Flood with water

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Build dikes to contain flow as necessary

Personnel protection

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Avoid breathing dusts, and fumes from burning material

COMPOUNDS METAL PURIFYING, NEC (POISONOUS SOLID, N.O.S.) 4923390

POISON B

NA2811

Compounds metal purifying are various colored solid materials. They may or may not be water soluble. They are toxic by ingestion, inhalation (dusts), or by skin absorption.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

COMPOUNDS, CASE CARBURIZING OR HARDENING, NEC (POISONOUS SOLID, N.O.S.) 4923391

POISON B

NA2811

Compounds, case carburizing or hardening, nec are various colored solids frequently containing some cyanide. The material is toxic by ingestion. Cyanides are decomposed by acids giving off hydrogen cyanide a flammable poison gas. Cyanides are also toxic by skin absorption through open wounds and by inhalation of the hydrogen cyanide from decomposition.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

COMPOUNDS, CASE HARDENING OR CARBURIZING, CHARCOAL, COAL OR COKE BASE (POISONOUS SOLID, N.O.S.) 4923392

POISON B

NA2811

Compounds, case hardening or carburizing, charcoal, coal or coke base are black solids frequently containing some cyanide. The material is toxic by ingestion. Cyanides are decomposed by acids giving off hydrogen cyanide a flammable poison gas. Cyanides are also toxic by skin absorption through open wounds, and by inhalation of hydrogen cyanide from the decomposition of the material.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

COMPOUNDS, HECTOGRAPH (COMBUSTIBLE LIQUID, N.O.S.) 4915470

COMBUSTIBLE LIQUID

NA1993

Compounds, hectograph are materials containing a solvent having a closed cup flash point between 100 and 199 deg. F. The hazard of these materials is combustibility.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

COMPOUNDS, HECTOGRAPH (FLAMMABLE LIQUID, N.O.S.) 4910470

FLAMMABLE LIQUID

UN1993

Compounds, hectograph are materials containing a solvent having a closed cup flash point of less than 100 deg. F. The hazard of these materials is flammability.

Continued on next page

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

COMPOUNDS, IRON OR STEEL RUST PREVENTING, OTHER THAN PETROLEUM, NEC (RUST PREVENTIVE COATING) 4915184**COMBUSTIBLE LIQUID NA1142**

Compounds, iron or steel rust preventing other than petroleum, nec are thick variable colored liquids having an odor of paint. They have a flash point between 100 and 199 deg. F. They are insoluble in water and are heavier than water. Their vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**COMPOUNDS, LEATHER FINISHING, NEC 4915472
(COMBUSTIBLE LIQUID, N.O.S.)****COMBUSTIBLE LIQUID NA1993**

Compounds, leather finishing, nec is a material containing a solvent having a closed cup flash point between 100 and 199 deg. F. The hazard of this material is combustibility.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

**COMPOUNDS, LEATHER FINISHING, NEC 4910472
(FLAMMABLE LIQUID, N.O.S.)****FLAMMABLE LIQUID UN1993**

Compounds, leather finishing, nec is a material containing a solvent having a closed cup flash point of less than 100 deg. F. The hazard of this material is flammability.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**COMPOUNDS, PETROLEUM TREATING, CRUDE, NEC 4936563
(ACID, LIQUID, N.O.S.)****CORROSIVE MATERIAL UN1760**

Compounds, petroleum treating, crude, nec are various colored liquids. They are corrosive to metals and tissue. They may burn though it may require some effort to ignite.

If material on fire or involved in fire

Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Solid streams of water may be ineffective
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

**COMPOUNDS, PETROLEUM TREATING, CRUDE, NEC 4910349
(FLAMMABLE LIQUID, N.O.S.)**

FLAMMABLE LIQUID UN1993

Compounds, petroleum treating, crude, nec are various colored liquids. They have a flash point of less than 100 deg. F. They are generally lighter than water and soluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**COMPOUNDS, RUST PREVENTING (OR) COMPOUND 4936530
RUST REMOVING**

CORROSIVE MATERIAL NA1760

Compounds rust preventing or compound rust removing are various colored liquids. They are soluble in water with evolution of heat. They are corrosive to metals and tissue.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

**COMPOUNDS, STONE STENCIL, IN SHEET FORM 4936571
(CORROSIVE SOLID, N.O.S.)**

CORROSIVE MATERIAL UN1759

Compounds, stone stencil in sheet form are various materials impregnated in paper or cloth. These compounds have the property of being corrosive to tissue. They may or may not be water soluble. The sheets may be combustible.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use dry chemical, carbon dioxide, or dry sand
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**COMPOUNDS, TREE OR WEED KILLING, LIQUID 4921419
POISON B NA2810**

Compound, tree or weed killing, liquid are various materials or solutions that have the property of being toxic by ingestion, inhalation or skin absorption.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**COMPOUNDS, WALL OR WALL PAPER CLEANING 4910414
(COMPOUND, CLEANING, LIQUID)**

FLAMMABLE LIQUID NA1993

Compounds, wall or wall paper cleaning contain a flammable liquid. The flash point is less than 100 deg. F. The hazard is flammability.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

COMPOUNDS, WALL OR WALL PAPER CLEANING 4915414
(COMPOUND, CLEANING, LIQUID)

COMBUSTIBLE LIQUID NA1993

Compounds, wall or wall paper cleaning contain a combustible liquid. The flash point is between 100 and 199 deg. F. The hazard is combustibility.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

COMPOUNDS, WATER SYSTEM RUST OR SCALE 4936546
PREVENTING, DRY (CORROSIVE SOLID, N.O.S.)

CORROSIVE MATERIAL UN1759

Compounds, water system rust or scale preventing, dry are various colored solid materials. They are water soluble. They are corrosive to tissue.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

COMPRESSED GAS, N.O.S. 4905710
FLAMMABLE GAS UN1954

Compressed gases, n.o.s. are materials which are shipped in containers under pressure. They may be mixtures of flammable and non-flammable gases. With the mixture having flammable properties. The gas is easily ignited. The mixture may separate with the flammable gas settling in low areas, or the nonflammable gas settling in low areas. It may only be shipped in cylinders. A flame may flash back to the source of leak very easily. Under fire conditions the cylinders may violently rupture and rocket. If the cylinder is an aerosol it will violently rupture under fire conditions.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

COMPRESSED GAS, N.O.S. 4904515
NONFLAMMABLE GAS UN1956

Compressed gases, n.o.s. are materials which are shipped in containers under pressure. They may be mixtures consisting of a nonflammable gas(es) and a flammable gas(es) with the mixture having nonflammable properties. The mixture may separate with the flammable gas settling in low areas, or the nonflammable gas settling into low areas. It may asphyxiate by the displacement of air. It may only be shipped in cylinders. If the cylinder is an aerosol container, it can rupture and rocket under fire conditions.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Do not use water on material itself
- Use water spray to absorb vapors

If material not involved in fire

- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If material leaking (not on fire), downwind evacuation must be considered

COPPER ACETATE (VERDIGRIS) (CUPRIC ACETATE) 4962310
ORM-E NA9106

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Copper acetate is a bluish greenish crystalline solid. It is used as an insecticide, in the preparation of other chemicals, as a fungicide, and mildew preventive. It is soluble in water. It is non-combustible.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

Keep upwind

Wear boots, protective gloves, and goggles

Avoid breathing vapors or dusts

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Adjust pH to neutral (pH-7)

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

COPPER ACETOARSENITE, SOLID**4923220****POISON B****UN1585****ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)**

Copper acetoarsenite, solid is an emerald-green powder. It is insoluble in water. It is toxic by inhalation (dust) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Remove trapped material with suction hoses

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

COPPER ARSENITE, SOLID**4923221****POISON B****UN1586**

Copper arsenite, solid is a light green powder. It is insoluble in water. It is toxic by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

COPPER BASED PESTICIDE, LIQUID, N.O.S.**4923331****(COMPOUNDS AND PREPARATIONS)****(INSECTICIDES, OTHER THAN AGRICULTURAL, NEC)****POISON B****UN2775**

Copper based pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The carrier may burn though it may require some effort to ignite. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

COPPER BASED PESTICIDE, LIQUID, N.O.S.**4923332****(COMPOUNDS AND PREPARATIONS)****(AGRICULTURAL INSECTICIDES, NEC, LIQUID)****POISON B****UN2775**

Copper based pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The carrier may burn though it may require some effort to ignite. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

COPPER BASED PESTICIDE, LIQUID, N.O.S. 4910506
(COMPOUNDS AND PREPARATIONS)
(AGRICULTURAL INSECTICIDES, NEC, LIQUID)
FLAMMABLE LIQUID UN2776

Copper based pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The primary hazard of this material is the flammability of the carrier. It has a flash point below 100 deg. F. It can cause illness by inhalation, skin absorption and or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wear self-contained breathing apparatus when fighting fires involving this material

COPPER BASED PESTICIDE, SOLID, N.O.S. 4923334
(COMPOUNDS AND PREPARATIONS)
(AGRICULTURAL INSECTICIDES, NEC, OTHER THAN LIQUID)
POISON B UN2776

Copper based pesticide is a solid or a liquid absorbed on a dry carrier. It is a wettable powder. It is toxic by inhalation, skin absorption, and or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

COPPER BASED PESTICIDE, LIQUID, N.O.S. 4910505
(COMPOUNDS AND PREPARATIONS)
(INSECTICIDES, OTHER THAN AGRICULTURAL, NEC)
FLAMMABLE LIQUID UN2776

Copper based pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The primary hazard of this material is the flammability of the carrier. It has a flash point below 100 deg. F. It can cause illness by inhalation, skin absorption and or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wear self-contained breathing apparatus when fighting fires involving this material

COPPER BASED PESTICIDE, SOLID, N.O.S. 4923333
(COMPOUNDS AND PREPARATIONS)
(INSECTICIDES, OTHER THAN AGRICULTURAL, NEC)
POISON B UN2775

Copper based pesticide is a solid or a liquid absorbed on a dry carrier. It is a wettable powder. It is toxic by inhalation, skin absorption, and or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

COPPER CHLORIDE 4944173
ORM-B UN2802
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10 4.54)

Copper chloride is a yellowish brown powder or a green crystalline it is used to manufacture other chemicals, in dyeing, in printing, in fungicides, as a wood preservative, and for many other uses. It is soluble in water. It is non-combustible. It is corrosive to aluminum.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Adjust pH to neutral (pH-7)
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**COPPER CYANIDE
POISON B**

**4923418
UN1587**

Copper cyanide is a green powder. It is insoluble in water. It is decomposed by acids to give off hydrogen cyanide, a flammable poison gas. It is toxic by skin absorption through open wounds, by ingestion, and by inhalation of hydrogen cyanide from decomposition of the material. Toxic oxides of nitrogen are produced in fires involving this material.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use foam, carbon dioxide or dry chemical
Do not use water on material itself
If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
Use water spray to absorb vapors

If material not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Use water spray to knock-down vapors
Do not use water on material itself

Personnel protection

Avoid breathing vapors or dusts
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

**COPPER NAPHTHANATE PETROLEUM SOLUTION,
NOT MORE THAN 8% COPPER NAPHTHANATE
(FLAMMABLE LIQUID, N.O.S.)**

4910516

FLAMMABLE LIQUID

UN1993

Copper naphthanate petroleum solution is a green colored liquid with a petroleum like odor. It has a flash point of less than 100 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire

Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**COPPER NAPHTHANATE SOLUTION, NOT MORE
THAN 8% COPPER NAPHTHANATE
(COMBUSTIBLE LIQUID, N.O.S.)**

4915516

COMBUSTIBLE LIQUID

NA1993

Copper naphthanate solution is a green colored liquid with a petroleum like odor. It has a flash point between 100 and 199 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**COPPER NITRATE SOLUTION (CUPRIC NITRATE)
OXIDIZER**

4918745

NA1479

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Copper nitrate solution is a blue crystalline solid dissolved in water. It is used in medicine, as an insecticide, in chemical analysis, in making light sensitive papers, and for many other uses. It is noncombustible, but it will accelerate the burning of combustible materials. If large quantities of the material are involved or the material is finely divided, an explosion may result. Prolonged exposure to fire or heat may result in an explosion. Toxic oxides of nitrogen are produced in fires involving this material.

If material on fire or involved in fire

Flood with water
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Continued on next page

Personnel protection

Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 2500 feet

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Adjust pH to neutral (pH-7)

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

COPPER RESINATE, (FLAMMABLE SOLID, N.O.S.) 4916762
FLAMMABLE SOLID UN1325

Copper resinate is a green amorphous powder. It may spontaneously heat in the presence of air and moisture. This heat may be sufficient to ignite nearby combustible material. It is insoluble in water.

If material on fire or involved in fire

Use water in flooding quantities as fog
 Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

COPPER SULFATE AND LIME COMBINED, DRY 4961317
(CUPRIC SULFATE)

ORM-E NA9109
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)

Pentachlorophenol is a white powder or crystalline solid or, fused in copper sulfate is blue and lime is white. It is used as an agricultural soil is slightly soluble in water. It is non-combustible. Is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
 (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
 Build dikes to contain flow as necessary

Personnel protection

Keep upwind
 Wear boots, protective gloves, and goggles
 Avoid breathing vapors or dusts
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Adjust pH to neutral (pH-7)
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

COPPER SULPHATE AND SULPHUR (CUPRIC 4961318
SULFATE)

ORM-E NA9109
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)

Copper sulphate and sulphur is a solid; copper sulfate is blue and sulfur is yellow. It is used as an agricultural fungicide. The copper sulfate is soluble in water sulphur is not soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
 (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
 Build dikes to contain flow as necessary

Personnel protection

Keep upwind
 Wear boots, protective gloves, and goggles
 Avoid breathing vapors or dusts
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
 Adjust pH to neutral (pH-7)
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CORDEAU DETONANT FUSE 4903345
CLASS C EXPLOSIVE

Cordeau detonant fuse is a fuse containing a core of pentaerythrit tetranitrate or cyclotrimethylene-trinitramine not exceeding 400 grains per linear foot, overspun with tapes, yarns, plastics, or waterproofing compounds.

If material on fire or involved in fire

Dangerously explosive
 Flood with water
 Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Approach fire with caution
 Avoid breathing dusts, and fumes from burning material
 Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 1500 feet

CORES OR CORE ASSEMBLIES OR FUEL BLANKET 4926445
ASSEMBLIES, NUCLEAR REACTOR, NOT
IRRADIATED, WITH NON-IRRADIATED FUEL,
(RADIOACTIVE MATERIAL, N.O.S.)

RADIOACTIVE MATERIAL NA9181

Cores or core assemblies or fuel blanket assemblies, nuclear reactor, not irradiated, with non-irradiated fuel, are sealed metal tubes or tube assemblies containing the fuel.

Radioactive materials emit certain rays that may be hazardous. These rays can be detected only by instruments. Exposure of humans to intense radiation may be harmful, whereas film may be damaged by radiation from relatively low concentrations.

If material on fire or involved in fire

Contact the local, state, or department of energy radiological response team

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Contact the local, state, or department of energy radiological response team

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Keep upwind

Avoid breathing fumes from burning material

Wear full protective clothing

Wear self-contained breathing apparatus

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

Keep unnecessary people out of incident area until area declared safe by radiological response team

CORROSIVE LIQUID, N.O.S.**4936540****CORROSIVE MATERIAL****UN1760**

Corrosive liquid, n.o.s. is a liquid that can cause visible destruction or irreversible alterations in human skin tissue at the site of contact, or in the case of leakage from its packaging a liquid that has a severe corrosion rate on steel. It may be combustible though it may require some effort to ignite. It may or may not be water soluble.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use dry chemical, carbon dioxide, or dry sand

Do not use water on material itself

If large quantities of combustibles are involved, use water in flooding quantities as spray and fog

Use water spray to absorb vapors

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

CORROSIVE LIQUID, POISONOUS, N.O.S.**4936015****CORROSIVE MATERIAL, POISONOUS****UN2922**

Corrosive liquid, poisonous, n.o.s. is a liquid that can cause visible destruction or irreversible alterations in human skin tissue at the site of contact, or in the case of leakage from its packaging a liquid that has a severe corrosion rate on steel, is also toxic by ingestion, inhalation, or by skin absorption. It may be combustible though it may require some effort to ignite. It may or may not be water soluble.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use dry chemical, carbon dioxide, or dry sand

Do not use water on material itself

If large quantities of combustibles are involved, use water in flooding quantities as spray and fog

Use water spray to absorb vapors

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

CORROSIVE SOLID, N.O.S.**4936545****CORROSIVE MATERIAL****UN1759**

Corrosive solid, n.o.s. is a variable colored material that can cause visible destruction or irreversible alteration in human skin tissue at the site of contact. It may be combustible though requiring some effort to ignite. It may or may not be water soluble.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use dry chemical, carbon dioxide, or dry sand

Do not use water on material itself

If large quantities of combustibles are involved, use water in flooding quantities as spray and fog

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

COSMETICS, N.O.S.**4917377****FLAMMABLE SOLID****NA1325**

Cosmetics, n.o.s. is the proper shipping name of any solid material, other than one classed as an explosive, or specifically listed by name in the list of hazardous materials which is liable under conditions incident to transportation to cause fires through friction, absorption of moisture, spontaneous chemical changes as a result of retained heat from the manufacturing or processing of the solid, or which can be readily ignited by external sparks or flame and when so ignited burns vigorously and persistently. Try to ascertain the exact name of the material.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of fire

Continued on next page

If material not on fire and not involved in fire
Keep sparks, flames, and other sources of ignition away
Build dikes to contain flow as necessary
Personnel protection
Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

COSMETICS, N.O.S. 4918411
OXIDIZER NA1479

Cosmetics, n.o.s. are various materials which have the property of accelerating the burning of combustible material. These materials may not burn by themselves. Prolonged exposure of these materials and or their containers to fire or heat may result in an explosion. These materials may only be shipped in containers of 55 gallon capacity or less

If material on fire or involved in fire
Flood with water
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire
Keep material out of water sources and sewers

Personnel protection
Avoid breathing dusts
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
Approach fire with caution

Evacuation
If fire becomes uncontrollable—evacuate for a radius of 1500 feet

COSMETICS, N.O.S. 4910192
FLAMMABLE LIQUID NA1993

Cosmetics, n.o.s. is the proper shipping name for those materials having a closed cup flash point of less than 100 deg. F. and not specifically mentioned in the hazardous materials regulations. The hazard is flammability.

If material on fire or involved in fire
Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire
Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection
Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

COSMETICS, N.O.S. 4915192
COMBUSTIBLE LIQUID NA1993

Cosmetics, n.o.s. is the proper shipping name for those materials having a closed cup flash point between 100 and 199 deg. F. and not specifically mentioned in the hazardous materials regulations. The hazard is combustibility.

If material on fire or involved in fire
Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire
Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection
Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

COSMETICS, N.O.S., LIQUID 4936551
CORROSIVE MATERIAL NA1760

Cosmetics, n.o.s., liquid is the proper shipping name for various colored liquids having the property of being corrosive to steel or tissue. It may either be a simple liquid material or a solid material dissolved in a solvent. It may be combustible though requiring some effort to ignite. They may or may not be water soluble.

If material on fire or involved in fire
Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Solid streams of water may be ineffective
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire
Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection
Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

COSMETICS, N.O.S., SOLID 4936552
CORROSIVE MATERIAL NA1759

Cosmetics, n.o.s., solid is the proper shipping name for various colored solids having the property of being corrosive to tissue. They may or may not be water soluble.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use dry chemical, carbon dioxide, or dry sand
Do not use water on material itself
If large quantities of combustibles are involved, use water in flooding quantities as spray and fog

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

COTTON WASTE, OILY (WITH MORE THAN 5% ANIMAL OR VEGETABLE OIL) 4917415

FLAMMABLE SOLID UN1364

Cotton waste, oily is material contaminated, coated or impregnated with animal or vegetable oil. It is liable to spontaneous heating and ignition.

If material on fire or involved in fire

Flood with water

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

COUMAPHOS 4921505
POISON B NA2783

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)

Coumaphos is white to light brown crystalline solid. It is combustible and is insoluble in water. It is toxic by ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

COUMAPHOS MIXTURE, LIQUID (AGRICULTURAL INSECTIDES, NEC, LIQUID) 4921506

POISON B NA2783
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)

Coumaphos mixture, liquid is the white to light brown crystalline solid dissolved in a liquid carrier. It is combustible and is insoluble in water. It is toxic by ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CREOSOTE, COAL TAR 4915363
COMBUSTIBLE LIQUID NA1993

Creosote, coal tar is a yellowish to dark green colored liquid with a characteristic odor. It is used as a wood preservative and as a disinfectant. It has a flash point in the range of 120 to 180 deg. F. It is heavier than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

CRESOL 4931417
CORROSIVE MATERIAL, ACIDIC, COMBUSTIBLE UN2076
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Cresylic acid is a colorless to yellow liquid with a tar-like odor. It is combustible and has a flash point of 178 deg. F. It is insoluble in water. It is corrosive to tissue.

It weighs 8.7 pounds per gallon.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Vapor knockdown water is corrosive or toxic and should be diked for containment

CROTONALDEHYDE 4909137
FLAMMABLE LIQUID UN1143
POLYMERIZABLE
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Crotonaldehyde is a clear, colorless to straw colored liquid with a penetrating pungent odor. It has a flash point of 55 deg. F. If subject to heat it may polymerize. If polymerization takes place in a container the container may violently rupture. It is lighter than water and slightly soluble in water, its vapors are heavier than air.

It weighs 7.1 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash or cement powder
- Apply fluorocarbon-water foam to diminish vapor and fire hazard
- Add sodium bisulfite (nahso3)

Environmental considerations—water spill

- Use natural barriers or oil spill control booms to limit spill motion
- Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material
- Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms
- Remove trapped material with suction hoses
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

CROTONIC ACID 4931418
CORROSIVE MATERIAL, ACIDIC, COMBUSTIBLE UN2823

Crotonic acid is a white crystalline solid. It is combustible and has a flash point of 190 deg. F. It is soluble in water. It is corrosive to metals and tissue.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep material out of water sources and sewers
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

CROTONYLENE 4909138
FLAMMABLE LIQUID UN1144

Crotonylene is a clear colorless liquid with a petroleum like odor. It has a flash point of less than -4 deg. F. and a boiling point of 81 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

CRUDE NITROGEN FERTILIZER SOLUTION (MORE THAN 25.3 PSIG) 4904240
NONFLAMMABLE GAS, CORROSIVE NA1043

Crude nitrogen fertilizer solution is the aqueous solution of nitrogen fertilizer charged with ammonia gas having an absolute pressure exceeding 40 psi at 70 deg. F. in the container. the solution is corrosive. Although ammonia is lighter than air, the vapors from a leak initially hug the ground.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use water spray to absorb vapors

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and gas tight goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

Evacuation

- If material leaking (not on fire), downwind evacuation must be considered

CRUDE OIL, PETROLEUM 4910165
FLAMMABLE LIQUID UN1267

Crude oil, petroleum is dark viscous liquid. It has a flash point of less than 100 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

CRUDE OIL, PETROLEUM 4915165
COMBUSTIBLE LIQUID UN1267

Crude oil, petroleum is a dark viscous liquid. It has a flash point between 100 and 199 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

CUMENE (COMBUSTIBLE LIQUID, N.O.S.) 4913125
COMBUSTIBLE LIQUID NA1993

Cumene is a clear colorless liquid with an aromatic odor. It has a flash point of 111 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

CUMENE HYDROPEROXIDE 4919525
ORGANIC PEROXIDE UN2116

Cumene hydroperoxide is a colorless to pale yellow colored liquid. It must be shipped as a solution not exceeding 96% in a non-volatile solvent. The solution may take some effort to ignite but once ignited it burns with increasing vigor as the fire progresses. It strongly supports the burning of combustible material. Containers of the solution if exposed to fire or flame may explode. Solutions of 90% peroxide in a non-volatile solvent may be shipped in tank cars.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

Continued on next page

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**CUPRIC NITRATE
OXIDIZER**

4918744
NA1479

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Cupric nitrate is a blue crystalline solid. It is used in medicine, as an insecticide, in chemical analysis, in making light sensitive papers, and for many other uses. It is soluble in water. It is noncombustible, but it will accelerate the burning of combustible materials. If large quantities of the material are involved or the material is finely divided, an explosion may result. Prolonged exposure to fire or heat may result in an explosion. Toxic oxides of nitrogen are produced in fires involving this material.

If material on fire or involved in fire

Flood with water
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material.

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 2500 feet

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Adjust pH to neutral (pH-7)
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**CUPRIC OXALATE
ORM-E**

4962610
NA2449

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Cupric oxalate is a bluish white powder. It is used as a catalyst in the manufacture of other chemicals. It is insoluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**CUPRIC SULFATE
ORM-E**

4961316
NA9109

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)

Cupric sulfate is a blue crystalline solid. It is used in agriculture, as a fertilizer, pesticide, or feed additive, to make other copper compounds, as a wood preservative, and for many other uses. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Adjust pH to neutral (pH-7)
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**CUPRIC SULFATE, AMMONIATED
ORM-E**

4962313
NA9110

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Cupric sulfate, ammoniated is a dark blue crystalline solid with a faint odor of ammonia. It is used as a pesticide, to print fabrics, and to make other copper compounds. It decomposes on exposure to air giving off ammonia. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Adjust pH to neutral (pH-7)
- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
- Adjust pH to neutral (pH-7)
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CUPRIC TARTRATE

4962614

ORM-E

NA9111

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Cupric tartrate is a green to blue powder. It is used for electroplating metals. It is insoluble in water. It is non-combustible.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CUPRIETHYLENE-DIAMINE SOLUTION

4935630

CORROSIVE MATERIAL, BASIC

UN1761

Cupriethylene-diamine solution is a purple colored liquid with an ammonia like odor. It is soluble in water. It is corrosive to metals and tissue. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

CUTCH, CATECHU, OR JAPONICA EXTRACTS, LIQUID (COMBUSTIBLE LIQUID, N.O.S.)

4915432

COMBUSTIBLE LIQUID

NA1993

Cutch, catechu, or japonica extracts, liquid are materials containing a solvent having a closed cup flash point between 100 and 199 deg. F. The hazard of these materials is combustibility.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

CUTCH, CATECHU, OR JAPONICA EXTRACTS, LIQUID (FLAMMABLE LIQUID, N.O.S.)

4910432

FLAMMABLE LIQUID

UN1993

Cutch, catechu, or japonica extracts, liquid are materials containing a solvent having a closed cup flash point of less than 100 deg. F. The hazard of these materials is flammability.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**CYANIDE OR CYANIDE MIXTURE, DRY
POISON B**

**4923224
UN1588**

Cyanide or cyanide mixtures, dry are generally white crystalline or powdered material. They are slowly decomposed by water and very rapidly decomposed by acids to give off hydrogen cyanide, a flammable poison gas. It is toxic by skin absorption through open wounds, by ingestion, and inhalation of the hydrogen cyanide from the decomposition of the material. Toxic oxides of nitrogen are produced in fires involving this material.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use foam, carbon dioxide or dry chemical

Do not use water on material itself

If large quantities of combustibles are involved, use water in flooding quantities as spray and fog

Use water spray to absorb vapors

If material not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Use water spray to knock-down vapors

Do not use water on material itself

Personnel protection

Avoid breathing vapors or dusts

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

**CYANOGEN BROMIDE
POISON B**

**4923229
UN1889**

Cyanogen bromide is a colorless to white crystalline solid with a penetrating odor, it is used in gold extraction, to make other chemicals, and as a fumigant. It is slightly soluble in water. It is gradually decomposed by water and very rapidly by acids to give off hydrogen bromide, a flammable poison gas. Contamination with many materials can cause rapid decomposition of the material. It is toxic by inhalation of its vapors or by the hydrogen cyanide from decomposition or by ingestion. Toxic oxides of nitrogen are produced in fire involving this material.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use foam, carbon dioxide or dry chemical

Cool all affected containers with flooding quantities of water

Do not use water on material itself

If large quantities of combustibles are involved, use water in flooding quantities as spray and fog

Use water spray to absorb vapors

If material not involved in fire

Keep material out of water sources and sewers

Use water spray to knock-down vapors

Do not use water on material itself

Personnel protection

Avoid breathing vapors or dusts

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

**CYANIDE SOLUTION, N.O.S.
POISON B**

**4923230
UN1935**

Cyanide solution, n.o.s. is the white crystalline material dissolved in water with a stabilizer having the faint odor of bitter almonds. It is slowly decomposed by water and very rapidly by acids to give off hydrogen cyanide, a flammable poison gas. It is toxic by skin absorption, by ingestion, and inhalation of the hydrogen cyanide from the decomposition of the material.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Use foam, carbon dioxide or dry chemical

Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

**CYANOGEN CHLORIDE (CONTAINING LESS THAN
0.9% WATER)**

4920506

POISON A

UN1589

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)

Cyanogen chloride is a colorless liquid boiling at 60 deg. F. with a strong odor. In very low concentrations it is irritating to the eyes and mucous membranes while in higher concentrations it is toxic by inhalation. Its vapor is heavier than air. It may only be shipped in cylinder. Prolonged exposure of the cylinder to fire or heat may cause violently rupturing and rocketing.

It weighs 10.0 pounds per gallon.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

Add caustic soda
Add calcium hypochlorite
Adjust pH to neutral (pH-7)

Environmental considerations—air spill

Apply water spray or mist to knock down vapors
Vapor knockdown water is corrosive or toxic and should be diked for containment

CYANOGEN GAS

4920115

POISON A, FLAMMABLE

UN1026

Cyanogen gas is a colorless gas with an odor of almonds, it is used to make other chemicals, as a fumigant, and as a rocket propellant. It is shipped as a liquefied gas under its vapor pressure. Its vapor is heavier than air and a flame can travel back to the source of leak very easily. Material is soluble in water and slowly decomposed by water to oxalic acid, a non regulated material, and ammonia. Material may be only shipped in cylinders and these may have to be overpacked in wooden boxes. Prolonged exposure to fire or heat may cause violent rupturing and rocketing of the cylinders.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Solid streams of water may be ineffective
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If material leaking (not on fire), downwind evacuation must be considered

CYCLOHEXANE

4908132

FLAMMABLE LIQUID

UN1145

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Cyclohexane is a clear colorless liquid with a petroleum-like odor. It is used to make nylon, as a solvent, paint remover, and to make other chemicals. It has a flash point of -4 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

It weighs 6.5 pounds per gallon.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet

If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents

Apply "universal" gelling agent to immobilize spill

Apply fluorocarbon-water foam to diminish vapor and fire hazard

Environmental considerations—water spill

Use natural barriers or oil spill control booms to limit spill motion
Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material
Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

CYCLOHEXANONE (COMBUSTIBLE LIQUID, N.O.S.)

4913179

COMBUSTIBLE LIQUID

NA1993

Cyclohexanone is a colorless to pale yellow liquid with a pleasant odor. It is used to make nylon, as a chemical reaction medium, and as a solvent. It is lighter than water and is slightly soluble in water. It has a flash point of 111 deg. F. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

CYCLOHEXANONE PEROXIDE (IN SOLUTION WITH NOT MORE THAN 9% BY WEIGHT ACTIVE OXYGEN) 4919527

ORGANIC PEROXIDE UN2118

Cyclohexanone peroxide, (in solution with not more than 9% by weight active oxygen) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

CYCLOHEXANONE PEROXIDE AND BIS(1-HYDROXYCYCLOHEXYL) PEROXIDE MIXTURE 4919537

ORGANIC PEROXIDE UN2119

Cyclohexanone peroxide and bis(1-hydroxycyclohexyl) peroxide mixture is a colorless solution of a white crystalline solid in a non-volatile solvent. The solution may take some effort to ignite but once ignited it burns with increasing vigor as the fire progresses. The dried material is easier to ignite. It strongly supports the burning of combustible material. The dried material can form explosive mixtures with finely divided combustible materials. Under prolonged exposure to heat or fire containers of the material can explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

CYCLOHEXANONE PEROXIDE AND DI-(1-HYDROXYCYCLOHEXYL) PEROXIDE MIXTURE 4919125

ORGANIC PEROXIDE UN2896

Cyclohexanone peroxide and di-(1-hydroxycyclohexyl) peroxide mixture is a white solid or colorless to white liquid or paste. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat, containers of the materials may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

CYCLOHEXANONE PEROXIDE, (AS A PASTE WITH NOT MORE THAN 9% BY WEIGHT ACTIVE OXYGEN) 4919528

ORGANIC PEROXIDE UN2896

Cyclohexanone peroxide, (as a paste with not more than 9% by weight active oxygen) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

CYCLOHEXANONE PEROXIDE, (NOT OVER 50% PEROXIDE) 4919530**ORGANIC PEROXIDE UN2896**

Cyclohexanone peroxide is a colorless solution of a white crystalline solid. The solution may take some effort to ignite but once ignited it burns with increasing vigor as the fire progresses. It strongly supports the burning of combustible material. The dried material is easily ignited. The dried material can form explosive mixtures with combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

CYCLOHEXANONE PEROXIDE, (50 TO 85% PEROXIDE) 4919535**ORGANIC PEROXIDE UN2119**

Cyclohexanone peroxide is a colorless solution of a white crystalline solid. The solution may take some effort to ignite but once ignited it burns with increasing vigor as the fire progresses. It strongly supports the burning of combustible material. The dried material is easily ignited. The dried material can form explosive mixtures with combustible materials. If exposed to fire or heat for prolonged periods of time, container of the solution may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

CYCLOHEXENYL TRICHLOROSILANE 4934217
CORROSIVE MATERIAL, ACIDIC, COMBUSTIBLE UN1762

Cyclohexenyl trichlorosilane is a colorless liquid with a pungent odor. It is used to make various silicon containing compounds. It is combustible and has a flash point of 200 deg. F. It is readily decomposed by moisture or water to hydrochloric acid with evolution of heat. It is corrosive to metals and tissue.

If material on fire or involved in fire

Use dry chemical, carbon dioxide, or dry sand
Do not use water on material itself
If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
Use water spray to absorb vapors
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors
Do not use water on material itself
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

CYCLOHEXYL TRICHLOROSILANE 4934218
CORROSIVE MATERIAL, ACIDIC UN1763

Cyclohexyl trichlorosilane is a colorless to pale yellow liquid with a pungent odor. It is combustible and has a flash point of 185 deg. F. It is readily decomposed by moisture or water to hydrochloric acid with evolution of heat. It is corrosive to metals and tissue.

Continued on next page

If material on fire or involved in fire

Use dry chemical, carbon dioxide, or dry sand
Do not use water on material itself
If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
Use water spray to absorb vapors
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors
Do not use water on material itself
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

**CYCLOHEXYLAMINE
FLAMMABLE LIQUID**

**4909139
UN2357**

Cyclohexylamine is a clear colorless to yellow liquid with an ammonia like odor. It has a flash point of 90 deg. F. It is irritating to the eyes and respiratory system. Skin contact may result in burns. It is lighter than water and soluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

**CYCLOPENTANE
FLAMMABLE LIQUID**

**4908135
UN1146**

Cyclopentane is a clear colorless liquid with a petroleum-like odor. It has a flash point of -35 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical
If material not on fire and not involved in fire
Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

**CYCLOPENTANE, METHYL
FLAMMABLE LIQUID**

**4908137
UN2298**

Cyclopentane, methyl is a clear colorless liquid with a petroleum-like odor. It has a flash point of -17 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

**CYCLOPROPANE
FLAMMABLE GAS**

**4905713
UN1027**

Cyclopropane is a colorless gas with a petroleum like odor. It is shipped as a liquid under its own vapor pressure. It is easily ignited and may only be shipped in cylinders. It is heavier than air and a flame can flash back to the source of leak very easily. Contact with the liquid may cause frostbite. It can asphyxiate by the displacement of air. Under fire conditions the cylinders may violently rupture and rocket.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Use water spray to knock-down vapors
 Keep material dry

Personnel protection
 Avoid breathing vapors
 Keep upwind
 Wear protective gloves and goggles
 Do not handle broken packages without protective equipment
 Approach fire with caution

Evacuation
 If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
 If material leaking (not on fire), downwind evacuation must be considered

DDT (OR) DICHLORODIPHENYLTRICHLOROETHANE 4941129
ORM-A NA2761
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1:0.454)

Ddt is a colorless to white crystalline solid. It is used as a pesticide. It is a wettable powder or water emulsifiable liquid. It can cause illness by inhalation, skin absorption and or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire
 Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary

Personnel protection
 Keep upwind
 Wear boots, protective gloves, and goggles
 Avoid breathing vapors or dusts
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill
 Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill
 Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
 If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
 Remove trapped material with suction hoses
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DE-INKING COMPOUNDS USED IN RECYCLING 4935278
PAPER (CORROSIVE LIQUID, N.O.S.)
CORROSIVE MATERIAL UN1760

De-inking compounds are various colored liquids. They may or may not be soluble in water. They may burn though it may take some effort to ignite. They are corrosive to metals and tissue.

If material on fire or involved in fire
 Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
 Use water in flooding quantities as fog
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Solid streams of water may be ineffective
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard

Personnel protection
 Avoid breathing vapors
 Keep upwind
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 Wear self-contained breathing apparatus when fighting fires involving this material
 If contact with the material anticipated, wear full protective clothing

DECABORANE 4916610
FLAMMABLE SOLID, POISONOUS UN1868

Decaborane is a colorless to white crystalline material with a persistent disagreeable odor. It is readily ignited and once ignited burns with a green flame. It may spontaneously ignite on exposure to air. It is toxic by skin absorption. It is slightly soluble in cold water and is slowly hydrolyzed by hot water to give off hydrogen, a flammable gas. It forms shock sensitive compounds when dissolved in oxygenated or halogenated solvents.

If material on fire or involved in fire
 Use water in flooding quantities as fog
 Use dry chemical or carbon dioxide

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Keep material dry

Personnel protection
 Avoid breathing dusts
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear full protective clothing
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

DECAHYDRONAPHTHALENE 4913167
COMBUSTIBLE LIQUID UN1147

Decahydronaphthalene is a clear colorless liquid with an aromatic odor. It has a flash point of 134 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire
 Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may spread fire
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to knock-down vapors

Personnel protection
 Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

DECANOYL PEROXIDE, (TECHNICALLY PURE) 4919128
ORGANIC PEROXIDE UN2120

Decanoyl peroxide, (technically pure) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DECYL ALCOHOL, OTHER THAN PERFUMERY 4913121
GRADE (ALCOHOL, N.O.S.)
COMBUSTIBLE LIQUID UN1987

Decyl alcohol is a clear colorless liquid with a sweet fat-like odor. It has a flash point of 180 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

DEFOAMING COMPOUND, NEC, LIQUID 4915208
(COMBUSTIBLE LIQUID, N.O.S.)
COMBUSTIBLE LIQUID NA1993

Defoaming compound, nec, liquid is a variable colored liquid. It has a flash point between 100 and 199 deg. F. It is generally lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

DEFOAMING COMPOUND, NEC, LIQUID (FLAMMABLE 4910208
LIQUID, N.O.S.)

FLAMMABLE LIQUID UN1993

Defoaming compound, nec, liquid is a variable colored liquid. It has a flash point of less than 100 deg. F. It is generally lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

DEGUMMING COMPOUNDS, FABRIC OR FIBER 4915466
(COMBUSTIBLE LIQUID, N.O.S.)

COMBUSTIBLE LIQUID NA1993

Degumming compounds, fabric or fiber are materials containing a solvent having a flash point between 100 and 199 deg. F. The hazard of these materials is combustibility.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

DEGUMMING COMPOUNDS, FABRIC OR FIBER (FLAMMABLE LIQUID, N.O.S.) 4910466**FLAMMABLE LIQUID UN1993**

Degumming compounds, fabric or fiber are materials containing a solvent having a flash point of below 100 deg. F. The hazard of these materials is flammability.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

DELAY ELECTRIC IGNITER CLASS C EXPLOSIVE 4903435

Delay electric igniter consists of small metal, fiberboard or paste board tubes containing a wire bridge in contact with a small quantity of an ignition compound in contact to a short piece of igniter cord.

If material on fire or involved in fire

Flood with water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Approach fire with caution
Avoid breathing dusts, and fumes from burning material
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 1500 feet

DENATURED ALCOHOL FLAMMABLE LIQUID 4909141 NA1986

Denatured alcohol is a clear, colorless liquid with a characteristic odor. It is used as a fuel, solvent, antifreeze, and to make other chemicals. It has a flash point of 58-60 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

DENATURED ALCOHOL SOLVENT. (ALCOHOL, N.O.S.) 4909142**FLAMMABLE LIQUID UN1987**

Denatured alcohol is a clear, colorless liquid with a characteristic odor. It has a flash point of 58-60 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

DENATURED ALCOHOL, SOLIDIFIED (ALCOHOL, N.O.S.) 4910403**FLAMMABLE LIQUID UN1987**

Denatured alcohol, solidified is a sterno-like gel. The alcohol can separate out. The hazard is flammability.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**DENATURING ALCOHOL, NEC (ALCOHOL, N.O.S.) 4909143
FLAMMABLE LIQUID UN1987**

Denaturing alcohol is a clear colorless liquid. It has a flash point of 100 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**DENATURING ALCOHOL, NEC (ALCOHOL, N.O.S.) 4913133
COMBUSTIBLE LIQUID UN1987**

Denaturing alcohol, nec is a clear colorless liquid. It has a flash point between 100 and 199 deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**DETERGENT INTERMEDIATES, OTHER THAN CYCLIC 4915371
OR PETROLEUM (COMBUSTIBLE LIQUID, N.O.S.) NA1993
COMBUSTIBLE LIQUID**

Detergent intermediates, other than cyclic or petroleum are clear colorless liquid. They have a flash point between 100 and 199 deg. F. They are generally lighter than water and soluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**DETERGENT INTERMEDIATES, OTHER THAN CYCLIC 4910371
OR PETROLEUM (FLAMMABLE LIQUID, N.O.S.) UN1993
FLAMMABLE LIQUID**

Detergent intermediate, other than cyclic or petroleum are clear colorless liquid. They have a flash point of less than 100 deg. F. They are generally lighter than water and soluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**DETONATING FUZE 4901205
CLASS A EXPLOSIVE**

Detonating fuze is a device consisting of a detonator and may contain several ounces of high explosives encased in a heavy steel envelope. Under fire conditions they will explode.

If material on fire or involved in fire

- Dangerously explosive
- Do not fight fires in a cargo of explosives
- Evacuate area and let burn

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 5000 feet

**DETONATING FUZE, CLASS C EXPLOSIVE 4903215
CLASS C EXPLOSIVE**

Detonating fuze, class c explosive is a device containing a limited amount of explosive and is used to detonate the bursting charge of projectiles, bombs, mines, torpedoes, or grenades, or to transmit a detonation between two or more explosive devices.

If material on fire or involved in fire

Flood with water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Approach fire with caution
Avoid breathing dusts, and fumes from burning material
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 1500 feet

**DETONATING FUZE, RADIOACTIVE 4901210
CLASS A EXPLOSIVE**

Detonating fuze, radioactive is a device consisting of a detonator and may contain several ounces of high explosives and a small amount of a radioactive component encased in a steel envelope. Under fire conditions they will explode.

If material on fire or involved in fire

Dangerously explosive
Do not fight fires in a cargo of explosives
Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Avoid breathing dusts, and fumes from burning material
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

**DETONATING PRIMER (CAPS, BLASTING OR 4901260
ELECTRIC BLASTING, EXPLOSIVE)
CLASS A EXPLOSIVE**

Detonating primer is a device consisting of a metal or plastic envelope containing a detonator and an additional charge of high explosives. Under fire conditions these devices will explode.

If material on fire or involved in fire

Dangerously explosive
Do not fight fires in a cargo of explosives
Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Avoid breathing dusts, and fumes from burning material
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

**DETONATING PRIMER (CAPS, BLASTING OR 4901365
ELECTRIC BLASTING, EXPLOSIVE)
CLASS C EXPLOSIVE**

Detonating primer is a device consisting of a metal or plastic envelope containing a detonator and an additional charge of high explosives. Under fire conditions these devices will explode.

If material on fire or involved in fire

Dangerously explosive
Flood with water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Approach fire with caution
Avoid breathing dusts, and fumes from burning material
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 1500 feet

**DETONATORS (CAPS, BLASTING OR ELECTRIC 4901330
BLASTING, EXPLOSIVE)
CLASS C EXPLOSIVE**

Detonators are small tubes, usually made of an alloy of either copper or aluminum closed at one end and loaded with one or more charges of initiating or priming explosives. Under fire conditions they will explode.

If material on fire or involved in fire

Dangerously explosive
Do not fight fires in a cargo of explosives
Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Avoid breathing dusts, and fumes from burning material
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

**DETONATORS (CAPS, BLASTING OR ELECTRIC 4903360
BLASTING, EXPLOSIVE)
CLASS C EXPLOSIVE**

Detonators are small tubes, usually made of an alloy of either copper or aluminum closed at one end and loaded with one or more charges of initiating or priming explosives. Under fire conditions they will explode.

If material on fire or involved in fire

Dangerously explosive
Flood with water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Approach fire with caution
Avoid breathing dusts, and fumes from burning material
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 1500 feet

**DI(2-ETHYLHEXYL) PHOSPHORIC ACID 4931422
CORROSIVE MATERIAL, ACIDIC NA1902**

Di(2-ethylhexyl) phosphoric acid is a colorless liquid. It is insoluble in water. It is corrosive to metals and tissue.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use water spray to absorb vapors

Continued on next page

If material not on fire and not involved in fire
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

**1,1-DI-(TERT-BUTYLPEROXY)-3,3,5-TRIMETHYL
CYCLOHEXANE, (TECHNICALLY PURE) 4919296**

ORGANIC PEROXIDE UN2145

1,1-di-(tert-butylperoxy)-3,3,5-trimethyl cyclohexane, (technically pure) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**1,1-DI-(TERT-BUTYLPEROXY)-3,3,5-TRIMETHYL
CYCLOHEXANE, (NOT MORE THAN 57% IN
SOLUTION) 4919297**

ORGANIC PEROXIDE UN2146

1,1-di-(tert-butylperoxy)-3,3,5-trimethyl cyclohexane, (not more than 57% in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**1,1-DI-(TERT-BUTYLPEROXY)-3,3,5-TRIMETHYL
CYCLOHEXANE, (NOT MORE THAN 58% WITH
INERT SOLID) 4919298**

ORGANIC PEROXIDE UN2147

1,1-di-(tert-butylperoxy)-3,3,5-trimethyl cyclohexane, (not more than 58% with inert solid) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

2,2-DI-(TERT-BUTYLPEROXY)BUTANE, (NOT MORE THAN 55% IN SOLUTION) 4919210

ORGANIC PEROXIDE UN2111

2,2-di-(tert-butylperoxy)butane, (not more than 55% in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite, but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

1,1-DI-(TERT-BUTYLPEROXY)CYCLOHEXANE, (NOT MORE THAN 40% WITH INERT INORGANIC SOLID, WITH NOT LESS THAN 13% PHLEGMATIZER) 4919229

ORGANIC PEROXIDE UN2885

1,1-di-(tert-butylperoxy)cyclohexane, (not more than 40% with inert inorganic solid, with not less than 13% phlegmatizer) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode. The phlegmatizer is a material added to make the peroxide less reactive.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

1,1-DI-(TERT-BUTYLPEROXY)CYCLOHEXANE, (NOT MORE THAN 50% WITH PHLEGMATIZER) 4919230

ORGANIC PEROXIDE UN2897

1,1-di-(tert-butylperoxy)cyclohexane, (not more than 50% with phlegmatizer) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite, but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode. The phlegmatizer is a material added to make the peroxide less reactive.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

1,1-DI-(TERT-BUTYLPEROXY)CYCLOHEXANE, (NOT MORE THAN 77% IN SOLUTION) 4919227

ORGANIC PEROXIDE UN2180

1,1-di-(tert-butylperoxy)cyclohexane, (not more than 77% in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite, but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

Continued on next page

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**1,2-DI-(TERT-BUTYLPEROXY)CYCLOHEXANE, (NOT MORE THAN 77% IN SOLUTION) 4919228
ORGANIC PEROXIDE UN2181**

1,2-di-(tert-butylperoxy)cyclohexane, (not more than 77% in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**1,1-DI-(TERT-BUTYLPEROXY)CYCLOHEXANE, 4919226
(TECHNICALLY PURE)
ORGANIC PEROXIDE UN2179**

1,1-di-(tert-butylperoxy)cyclohexane, (technically pure) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**DI-(TERT-BUTYLPEROXY)PHTHALATE, (NOT MORE THAN 55% AS A PASTE) 4919288
ORGANIC PEROXIDE UN2108**

Di-(tert-butylperoxy)phthalate, (not more than 55% as a paste) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DI-(TERT-BUTYLPEROXY)PHthalATE, (NOT MORE THAN 55% IN SOLUTION) 4919287

ORGANIC PEROXIDE UN2107

Di-(tert-butylperoxy)phthalate, (not more than 55% in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DI-(TERT-BUTYLPEROXY)PHthalATE, (TECHNICALLY PURE) 4919286

ORGANIC PEROXIDE UN2106

Di-(tert-butylperoxy)phthalate, (technically pure) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

2,2-DI-(TERT-BUTYLPEROXY)PROPANE, (NOT MORE THAN 40% WITH INERT INORGANIC SOLID WITH NOT LESS THAN 13% PHEGMATIZER) 4919291

ORGANIC PEROXIDE UN2884

2,2-di-(tert-butylperoxy)propane, (not more than 40% with inert inorganic solid with not less than 13% phlegmatizer) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode. The phlegmatizer is a material added to make the peroxide less reactive.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**2,2-DI-(TERT-BUTYLPEROXY)PROPANE, (NOT MORE THAN 50% WITH PHLEGMATIZER) 4919290
ORGANIC PEROXIDE UN2883**

2,2-di-(tert-butylperoxy)propane, (not more than 50% with phlegmatizer) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode. The phlegmatizer is a material added to make the peroxide less reactive.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**DI-(1-HYDROXYCYCLOHEXYL) PEROXIDE, 4919279
(TECHNICALLY PURE)
ORGANIC PEROXIDE UN2148**

Di-(1-hydroxycyclohexyl) peroxide, (technically pure) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**DI-(2-ETHYLHEXYL) PEROXYDICARBONATE, (NOT MORE THAN 67% IN SOLUTION) 4919281
ORGANIC PEROXIDE UN2123**

Di-(2-ethylhexyl) peroxydicarbonate, (not more than 67% in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**DI-(2-ETHYLHEXYL) PEROXYDICARBONATE, 4919280
(TECHNICALLY PURE)
ORGANIC PEROXIDE UN2122**

Di-(2-ethylhexyl) peroxydicarbonate, (technically pure) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DI-(2-METHYLBENZOYL) PEROXIDE, (NOT MORE THAN 85% WITH WATER) 4919282

ORGANIC PEROXIDE UN2593

Di-(2-methylbenzoyl) peroxide, (not more than 85% with water) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

1,3-DI-(2-TERT-BUTYLPEROXYISOPROPYL) BENZENE AND 1,4-DI-(2-TERT-BUTYLPEROXYISOPROPYL) BENZENE MIXTURE, (TECHNICALLY PURE OR MORE THAN 40% WITH INERT SOLID) UN2112

1,3-di-(2-tert-butylperoxyisopropyl) benzene and 1,4-di-(2-tert-butylperoxyisopropyl) benzene mixture, (technically pure or more than 40% with inert solid) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

1,3-DI-(2-TERT-BUTYLPEROXYISOPROPYL) BENZENE, (TECHNICALLY PURE OR MORE THAN 40% WITH INERT SOLID) UN2112

1,3-di-(2-tert-butylperoxyisopropyl) benzene, (technically pure or more than 40% with inert solid) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

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Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

1,4-DI-(2-TERT-BUTYLPEROXYISOPROPYL) BENZENE, (TECHNICALLY PURE OR MORE THAN 40% WITH INERT SOLID) 4919208

ORGANIC PEROXIDE UN2112

1,4-di-(2-tert-butylperoxyisopropyl) benzene, (technically pure or more than 40% with inert solid) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical.
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DI-(3,5,5-TRIMETHYL-1,2-DIOXOLANYL-3) PEROXIDE, (NOT MORE THAN 50% AS A PASTE, WITH PHLEGMATIZER) 4919283

ORGANIC PEROXIDE UN2597

Di-(3,5,5-trimethyl-1,2-dioxolanyl-3) peroxide, (not more than 50% as a paste, with phlegmatizer) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode. The phlegmatizer is a material added to make the peroxide less reactive.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DI-(4-TERT-BUTYLCYCLOHEXYL)PEROXYDICARBONATE, (NOT MORE THAN 42%, STABLE DISPERSION, IN WATER) 4919284

ORGANIC PEROXIDE UN2894

Di-(4-tert-butylcyclohexyl)peroxydicarbonate, (not more than 42%, stable dispersion, in water) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DI-(4-TERT-BUTYL-CYCLOHEXYL)PEROXYDICARBONATE, (TECHNICALLY PURE) 4919285

ORGANIC PEROXIDE UN2154

Di-(4-tert-butylcyclohexyl)peroxydicarbonate, (technically pure) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

2,2-DI-(4,4-DI-TERT-BUTYLPEROXYCYCLOHEXYL) PROPANE, (NOT MORE THAN 42% WITH INERT SOLID) 4919292

ORGANIC PEROXIDE UN2168

2,2-di-(4,4-di-tert-butylperoxycyclohexyl) propane, (not more than 42% with inert solid) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DI-N-PROPYL PEROXYDICARBONATE, (TECHNICALLY PURE) 4919294

ORGANIC PEROXIDE UN2176

Di-n-propyl peroxydicarbonate, (technically pure) is a white solid. It is used to manufacture paints, plastics, and rubber. It is slightly soluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DI-N-PROPYLAMINE (FLAMMABLE LIQUID, N.O.S.) 4909157
FLAMMABLE LIQUID UN1993

Di-n-propylamine is a clear colorless liquid with an ammonia-like odor. It has a flash point of 30 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Continued on next page

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

DI-SEC-BUTYL PEROXYDICARBONATE, (NOT MORE THAN 52% IN SOLUTION) 4919214 ORGANIC PEROXIDE UN2151

Di-sec-butyl peroxydicarbonate, (not more than 52% in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DI-SEC-BUTYL PEROXYDICARBONATE, 4919215 (TECHNICALLY PURE) ORGANIC PEROXIDE UN2150

Di-sec-butyl peroxydicarbonate, (technically pure) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water

- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DI-tert-BUTYL PEROXIDE, (TECHNICALLY PURE) 4919213 ORGANIC PEROXIDE UN2102

Di-tert-butyl peroxide, (technically pure) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DIACETONE ALCOHOL 4909149 FLAMMABLE LIQUID UN1148

Diacetone alcohol is a clear colorless liquid with a pleasant odor. It has a flash point of less than 100 deg. F. It is lighter than water and is soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

DIACETONE ALCOHOL PEROXIDE, (NOT MORE THAN 57% IN SOLUTION WITH NOT MORE THAN 9% HYDROGEN PEROXIDE, NOT LESS THAN 26% DIACETONE ALCOHOL AND NOT LESS THAN 9% WATER; TOTAL ACTIVE OXYGEN CONTENT NOT MORE THAN 9%) 4919234

ORGANIC PEROXIDE

UN2163

Diacetone alcohol peroxide, (not more than 57% in solution with not more than 9% hydrogen peroxide, not less than 26% diacetone alcohol and not less than 9% water; total active oxygen content not more than 9%) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DIACETYL**FLAMMABLE LIQUID**

4909144

UN2346

Diacetyl is a clear colorless liquid with a strong chlorine like odor. It has a flash point of 80 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

DIAZINON (AGRICULTURAL INSECTICIDES, NEC. LIQUID)

4941141

ORM-A

NA2783

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Diazinon is a colorless to white liquid. It is used as a pesticide. It is a water emulsifiable liquid. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- Use natural barriers or oil spill control booms to limit spill motion
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DIAZINON (AGRICULTURAL INSECTICIDES, NEC, OTHER THAN LIQUID) 4941142

ORM-A NA2783 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Diazinon is a colorless to white liquid absorbed on a dry carrier. It is used as a pesticide. It is a wettable powder. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

DIAZINON (INSECTICIDES, OTHER THAN AGRICULTURAL, NEC) 4941140

ORM-A NA2783 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Diazinon is a colorless to white liquid or the liquid absorbed on a dry carrier. It is used as a pesticide. It is a wettable powder or water emulsifiable liquid. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

DIBENZYL PEROXYDICARBONATE, (NOT MORE THAN 87% WITH WATER) 4919235

ORGANIC PEROXIDE UN2149

Dibenzyl peroxydicarbonate, (not more than 87% with water) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**DIBORANE 4905420
FLAMMABLE GAS, POISONOUS UN1911**

Diborane is a colorless gas with an offensive odor. It is used in electronics. It is toxic by inhalation. Diborane is decomposed by water giving off hydrogen, another flammable gas and boric acid non-regulated material. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Approach fire with caution

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

**DIBORANE MIXTURES
FLAMMABLE GAS, POISONOUS**

**4905425
UN1911**

Diborane mixtures is a colorless gas with an offensive odor. It is used in electronics. Diborane is decomposed by water giving off hydrogen, another flammable gas, and boric acid, a non-regulated material. Their vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**DICAMBA (AGRICULTURAL INSECTICIDES, NEC,
OTHER THAN LIQUID)**

4963337

ORM-E

NA2769

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Dicamba is a white solid or the solid dissolve in a liquid carrier. It is used as a herbicide. It is a wettable powder. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**1,2-DIBROMOETHANE (See ETHYLENE DIBROMIDE
4940335)**

**DICAMBA (AGRICULTURAL INSECTICIDES, NEC,
LIQUID)**

4963334

ORM-E

NA2769

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Dicamba is a white solid dissolved in a liquid carrier. It is used as a herbicide. It is a water emulsifiable liquid. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash or cement powder

**DICAMBA (INSECTICIDES, OTHER THAN
AGRICULTURAL, NEC)**

4963332

ORM-E

NA2769

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Dicamba is a white solid or the solid dissolved in a liquid carrier. It is used as a herbicide. It is a wettable powder or water emulsifiable liquid. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DICETYL PEROXYDICARBONATE, (NOT MORE THAN 42%, STABLE DISPERSION, IN WATER) 4919237
ORGANIC PEROXIDE UN2895

Dicetyl peroxydicarbonate, (not more than 42%, stable dispersion, in water) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DICHOLOBENIL (AGRICULTURAL INSECTICIDES, NEC, LIQUID) 4963809

ORM-E NA2769
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Dichlobenil is a white solid dissolved in a liquid carrier. It is used as a herbicide. It is a water emulsifiable liquid. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

- Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DICETYL PEROXYDICARBONATE, (TECHNICALLY PURE) 4919238

ORGANIC PEROXIDE UN2164

Dicetyl peroxydicarbonate, (technically pure) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

DICHOLOBENIL (AGRICULTURAL INSECTICIDES, NEC, OTHER THAN LIQUID) 4963814

ORM-E NA2769
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Dichlobenil is a white solid. It is used as a herbicide. It is a wettable powder. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DICHOLOBENIL (INSECTICIDES, OTHER THAN AGRICULTURAL, NEC) 4963805

ORM-E NA2769 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Dichlobenil is a white solid or the solid dissolved in a liquid carrier. It is used as a herbicide. It is a wettable powder or water emulsifiable liquid. It can cause illness by inhalation, skin absorption and or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
 Build dikes to contain flow as necessary

Personnel protection

Keep upwind
 Wear boots, protective gloves, and goggles
 Avoid breathing vapors or dusts
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DICHLONE (AGRICULTURAL INSECTICIDES, NEC, LIQUID) 4960617

ORM-E NA2761 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Dichlone is a yellow crystalline solid dissolved in a liquid carrier. It is used as a fungicide. It is a water emulsifiable liquid. It can cause illness by inhalation, skin absorption and or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
 Build dikes to contain flow as necessary

Personnel protection

Keep upwind
 Wear boots, protective gloves, and goggles
 Avoid breathing vapors or dusts
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
 Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

Use natural barriers or oil spill control booms to limit spill motion
 If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
 Remove trapped material with suction hoses
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DICHLONE (AGRICULTURAL INSECTICIDES, NEC, OTHER THAN LIQUID) 4960616

ORM-E NA2761 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Dichlone is a yellow crystalline solid. It is used as a fungicide. It is a wettable powder. It can cause illness by inhalation, skin absorption and or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
 Build dikes to contain flow as necessary

Personnel protection

Keep upwind
 Wear boots, protective gloves, and goggles
 Avoid breathing vapors or dusts
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
 If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
 Remove trapped material with suction hoses
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DICHLONE (INSECTICIDES, OTHER THAN AGRICULTURAL, NEC) 4960618

ORM-E NA2761 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Dichlone is a yellow crystalline solid or the solid dissolved in a liquid carrier. It is used as a fungicide. It is a wettable powder or water emulsifiable liquid. It can cause illness by inhalation, skin absorption material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
 Build dikes to contain flow as necessary

Personnel protection

Keep upwind
 Wear boots, protective gloves, and goggles
 Avoid breathing vapors or dusts
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Continued on next page

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DICHLOROACETIC ACID 4931420
CORROSIVE MATERIAL, ACIDIC UN1764

Dichloroacetic acid is a colorless crystalline solid melting at 49 deg. F. It is soluble in water. It is corrosive to metals and tissue.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

DICHLOROACETYL CHLORIDE 4931735
CORROSIVE MATERIAL, ACIDIC, COMBUSTIBLE UN1765

Dichloroacetyl chloride is a colorless, fuming liquid with a pungent odor. It is combustible and has a flash point of 151 deg. F. Its vapors are irritating to the eyes and mucous membranes. It is decomposed by water to dichloroacetic acid and hydrochloric acid, corrosive materials, with release of heat. It is corrosive to metals and tissue.

If material on fire or involved in fire

Use dry chemical or carbon dioxide
Do not use water on material itself
If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
Use water spray to absorb vapors
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors
Do not use water on material itself
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

DICHLOROANILINE (POISONOUS SOLID, N.O.S.) 4921515
POISON B NA2811

Dichloroaniline is an amber to brownish colored crystalline solid. It is used in the manufacture of dyes and pesticides. It is insoluble in water and is combustible. It is toxic by skin absorption and by inhalation (dust, etc.). Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

Use dry chemical or carbon dioxide
Cool all affected containers with flooding quantities of water
Use water in flooding quantities as fog

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

DICHLOROBENZENE, ORTHO, LIQUID 4941127
ORM-A UN1591
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Dichlorobenzene, ortho, liquid is clear colorless liquid with a pleasant odor. It is used to make other chemicals, solvent, fumigant and insecticide, and for many other uses. It is combustible and has a flash point of 150 deg. F. It is heavier than water and is soluble in water.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder
Apply "universal" gelling agent to immobilize spill

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DICHLOROBENZENE, PARA, SOLID 4941128
ORM-A UN1592
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Dichlorobenzene, para, solid is a white crystalline volatile solid having the odor of moth balls. It is used as a moth repellent, to make other chemicals, as a fumigant, and for many other uses. It is heavier than water and insoluble in water. It will burn though it may take some effort to ignite.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

2,4-DICHLOROBENZOYL PEROXIDE, (NOT MORE THAN 52% AS A PASTE) 4919243**ORGANIC PEROXIDE UN2138**

2,4-dichlorobenzoyl peroxide, (not more than 52% as a paste) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

2,4-DICHLOROBENZOYL PEROXIDE, (NOT MORE THAN 52% IN SOLUTION) 4919244**ORGANIC PEROXIDE UN2139**

2,4-dichlorobenzoyl peroxide, (not more than 52% in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

2,4-DICHLOROBENZOYL PEROXIDE, (NOT MORE THAN 75% WITH WATER) 4919242**ORGANIC PEROXIDE UN2137**

2,4-dichlorobenzoyl peroxide, (not more than 75% with water) is a white solid. It is used to manufacture paints, plastics, and rubber. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

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Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**DICHLOROBUTENE
FLAMMABLE LIQUID, CORROSIVE****4907605
NA2924**

Dichlorobutene is a clear colorless to straw colored liquid. It has a flash point of 80 deg. F. It is corrosive to metals and tissue. It is heavier than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

**DICHLOROBUTENE
CORROSIVE MATERIAL****4936312
NA2924**

Dichlorobutene is a clear colorless liquid. It is used to make other chemicals. It will burn though it may require some effort to ignite. It is corrosive to tissue. It is heavier than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Solid streams of water may be ineffective
Use "alcohol" foam, carbon dioxide or dry chemical
Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

**DICHLORODIFLUOROMETHANE
NONFLAMMABLE GAS****4904516
UN1028**

Dichlorodifluoromethane is a colorless gas having a faint ethereal odor. It is shipped as a liquid under its own vapor pressure. It is non-combustible. It is heavier than air and can cause asphyxiation by the displacement of air. Contact with the liquid can cause frostbite. Toxic gases can be produced in fires involving this material.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Personnel protection

Avoid breathing vapors
Keep upwind
Wear protective gloves and goggles
Do not handle broken packages without protective equipment

**DICHLORODIFLUOROMETHANE AND
DIFLUOROETHANE MIXTURE (CONSTANT
BOILING MIXTURE)
NONFLAMMABLE GAS****4904534
UN2602**

Dichlorodifluoromethane and difluoroethane mixture is a colorless gas having a faint ethereal odor. It is shipped as a liquefied gas under its own vapor pressure. Dichlorodifluoromethane is noncombustible; difluoroethane is a flammable gas. The vapor of dichlorodifluoromethane is heavier than that of difluoroethane and both are heavier than air. They can asphyxiate by the displacement of air. Contact with the liquid can cause frostbite. Toxic gases can be produced in fires involving this material.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Personnel protection

Avoid breathing vapors
Keep upwind
Wear protective gloves and goggles
Do not handle broken packages without protective equipment

**DICHLORODIFLUOROMETHANE-
DICHLOTETRAFLUOROETHANE MIXTURE
NONFLAMMABLE GAS** 4904519
NA1956

Dichlorodifluoromethane-dichlorotetrafluoroethane mixture is a colorless gas having a faint ethereal odor. It is shipped liquefied as a gas under its own vapor pressure. Both dichlorodifluoromethane and dichlorotetrafluoroethane are noncombustible. The two gases are heavier than air and can asphyxiate by the displacement of air in a closed space. Contact with the liquid can cause frostbite. Toxic gases can be produced in fires involving this material.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Personnel protection

Avoid breathing vapors

Keep upwind

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

**DICHLORODIFLUOROMETHANE-
MONOCHLORODIFLUOROMETHANE MIXTURE
NONFLAMMABLE GAS** 4904522
NA1956

Dichlorodifluoromethane-monochlorodifluoromethane mixture is a colorless gas; odorless to a faint chloroform like odor. It is shipped as a liquefied gas under its own vapor pressure. Both gases are noncombustible. They can asphyxiate by the displacement of air in a closed space. Contact with the liquid can cause frostbite.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Personnel protection

Avoid breathing vapors

Keep upwind

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

**DICHLORODIFLUOROMETHANE-
MONOCHLOROTRIFLUOROMETHANE MIXTURE
NONFLAMMABLE GAS** 4904531
NA1956

Dichlorodifluoromethane-monochlorotrifluoromethane mixture is a colorless gas with no odor to a faint ethereal-carbon tetrachloride odor. It is shipped as a liquefied gas under its own vapor pressure. Both gases are noncombustible. They can asphyxiate by the displacement of air. Contact with the liquid can cause frostbite.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Personnel protection

Avoid breathing vapors

Keep upwind

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

**DICHLORODIFLUOROMETHANE-
TRICHLOROMONOFUOROMETHANE-
MONOCHLORODIFLUORO- METHANE MIXTURE
NONFLAMMABLE GAS** 4904525
NA1956

Dichlorodifluoromethane-trichloromonofluoromethane-monochlorodifluoromethane mixture is a colorless gas. It is shipped as a liquefied gas under its own vapor pressure. Its odor varies from none to faintly ethereal or carbon tetrachloride like odor. All three gases are noncombustible. They can asphyxiate by the displacement of air. Contact with the liquid can cause frostbite.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Personnel protection

Avoid breathing vapors

Keep upwind

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

**DICHLORODIFLUOROMETHANE-
TRICHLOROTRIFLUOROETHANE MIXTURE
NONFLAMMABLE GAS** 4904528
NA1956

Dichlorodifluoromethane-trichlorotrifluoroethane mixture is a colorless odorless gas. It is shipped as a liquefied gas under its own vapor pressure. Both gases are noncombustible. It can asphyxiate by the displacement of air. Contact with the liquid can cause frostbite.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Personnel protection

Avoid breathing vapors

Keep upwind

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

**DICHLOROETHYL ETHER (POISONOUS
LIQUID,N.O.S.)
POISON B** 4921550
NA2810

Dichloroethyl ether is a clear colorless liquid with a chloroform-like odor. It is used in cleaning compounds, in paints, in textile finishing, and as a general solvent. It is combustible and has a flash point of 131 deg. F. It is heavier than water and is insoluble in water. It is toxic by inhalation and skin absorption.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Continued on next page

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

DICHLOROETHYLENE FLAMMABLE LIQUID

4909145
UN1150

Dichloroethylene is a clear colorless liquid with an ether-like odor. It has a flash point of 36-39 deg. F. It is heavier than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

DICHLOROISOCYANURIC ACID (OXIDIZING MATERIAL, N.O.S.)

4918724

OXIDIZER

UN1479

Dichloroisocyanuric acid is a white crystalline solid with an odor of chlorine. It is used as a dry bleach in household cleaning compounds and in swimming pool disinfectants. The material itself is noncombustible but if contaminated with combustible material ignition can result. It will accelerate the burning of combustible materials. Contact with ammonium compounds or hydrated salts can cause a very vigorous chemical reaction. May vigorously react with small quantities of water releasing chlorine gas. Prolonged exposure of the material to fire or heat may result in its violent decomposition and rupturing of the container.

If material on fire or involved in fire

- Flood with water
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 2500 feet

DICHLOROISOPROPYL ETHER CORROSIVE MATERIAL, COMBUSTIBLE

4936315
UN2490

Dichloroisopropyl ether is a colorless liquid. It is combustible and has a flash point of 185 deg. F. It is heavier than water and insoluble in water. It is corrosive to metals and tissue.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

DICHLOROPENTANE FLAMMABLE LIQUID

4909147
UN1152

Dichloropentane is a clear colorless to yellow liquid. It has a flash point of 90 deg. F. It is lighter than water and is insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

2,4-DICHLOROPHENOXYACETIC ACID ORM-A

4941126
NA2765

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

2,4-dichlorophenoxyacetic acid is a white to yellow crystalline solid. It is used as a weed killer and defoliant. It is slightly soluble in water. It is non-combustible.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Remove trapped material with suction hoses
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

2,4-DICHLOROPHENOXYACETIC ACID ESTER 4962130
ORM-E NA2765
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

2,4-dichlorophenoxyacetic acid ester is a white solid. It is used as a herbicide and defoliant. It is slightly soluble in water.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Remove trapped material with suction hoses
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DICHLOROPHENYL TRICHLOROSILANE 4934225
CORROSIVE MATERIAL, ACIDIC UN1766

Dichlorophenyl trichlorosilane is a straw colored liquid with a pungent odor. Material will burn though it may require some effort to ignite. It is decomposed by moisture or water to hydrochloric acid with evolution of heat. It is corrosive to metals and tissue.

If material on fire or involved in fire

- Use dry chemical, carbon dioxide, or dry sand
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

DICHLOROPROPANE (See PROPYLENE DICHLORIDE 4909269)

DICHLOROPROPENE 4909255
FLAMMABLE LIQUID UN2047
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Dichloropropene is a clear colorless liquid. It is used to make other chemicals and as soil fumigant. It has a flash point of 95 deg. F. It is heavier than water and insoluble in water. Its vapors are heavier than air.

It weighs 10.2 pounds per gallon.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents
- Apply fluorocarbon-water foam to diminish vapor and fire hazard

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- Remove trapped material with suction hoses
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Combustion products include corrosive or toxic vapors
- Thermal decomposition to phosgene can occur

**DICHLOROPROPENE AND PROPYLENE DICHLORIDE 4907640
MIXTURE**

**FLAMMABLE LIQUID, CORROSIVE NA2047
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)**

Dichloropropene and propylene dichloride mixture is a colorless liquid with a chloroform like odor. It is flammable and has a flash point below 100 deg. F. It is heavier than water and insoluble in water. It is corrosive to metals and tissue.

It weighs 9.9 pounds per gallon.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents

Apply fluorocarbon-water foam to diminish vapor and fire hazard

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- Remove trapped material with suction hoses
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Combustion products include corrosive or toxic vapors
- Thermal decomposition to phosgene can occur

**2,2-DICHLOROPROPIONIC ACID 4931455
CORROSIVE MATERIAL NA1760
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)**

2,2-dichloropropionic acid is a colorless liquid. It is used as a herbicide. It is soluble in water. It is corrosive to metals and tissue.

It weighs 11.6 pounds per gallon.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Remove trapped material with suction hoses
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

**DICHLORVOS (AGRICULTURAL INSECTICIDES, NEC. 4921534
LIQUID)**

**POISON B NA2783
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)**

Dichlorvos is a colorless to amber liquid. It is used as a pesticide. It is a water emulsifiable liquid. It is toxic by inhalation, skin absorption, and or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

**DICHLORVOS (AGRICULTURAL INSECTICIDES, NEC, 4921535
OTHER THAN LIQUID)**

**POISON B NA2783
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10 4.54)**

Dichlorvos is a colorless to amber liquid absorbed on a dry carrier. It is used as a pesticide. It is a wettable powder. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**DICHLORVOS (INSECTICIDES, OTHER THAN 4921536
AGRICULTURAL, NEC)**

**POISON B NA2783
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10 4.54)**

Dichlorvos is a colorless to amber liquid or the liquid absorbed on a dry carrier. It is used as a pesticide. It is a wettable powder or water emulsifiable liquid. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

**DICHLORVOS MIXTURE, DRY (AGRICULTURAL 4921537
INSECTICIDES, NEC, OTHER THAN LIQUID)**

**POISON B NA2783
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10 4.54)**

Dichlorvos mixture, dry is a colorless to amber liquid absorbed on a dry carrier. It is used as a pesticide. It is a wettable powder. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**DICUMYL PEROXIDE (50% PEROXIDE) 4919545
ORGANIC PEROXIDE NA2121**

Dicumyl peroxide (50% peroxide) is a colorless to straw colored liquid. It may take some effort to ignite but once ignited it burns with increasing vigor as the fire progresses. It strongly supports the burning of combustible materials. If the containers of the peroxide are exposed to fire or heat for prolonged periods, they may explode.

Continued on next page

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Keep spilled material wet

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DICYCLOHEXYL PEROXYDICARBONATE, (NOT MORE THAN 91% WITH WATER) 4919248

ORGANIC PEROXIDE

UN2153

Dicyclohexyl peroxydicarbonate, (not more than 91% with water) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DICUMYL PEROXIDE, DRY 4919540

ORGANIC PEROXIDE

UN2121

Dicumyl peroxide, dry is a buff colored crystalline or lumpy solid. It is easily ignited and once ignited it burns with increasing vigor as the fire progresses. It strongly supports the burning of combustible material. If the containers of the peroxide are exposed to fire or heat for prolonged periods, they may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet

Personnel protection

- Avoid breathing vapors or dusts
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DICYCLOHEXYL PEROXYDICARBONATE, (TECHNICALLY PURE)

4919247

ORGANIC PEROXIDE

UN2152

Dicyclohexyl peroxydicarbonate, (technically pure) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**DIELDRIN (AGRICULTURAL INSECTICIDES, NEC, 4941134
LIQUID)**

**ORM-A NA2761
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)**

Dieldrin is a light tan solid dissolved in a liquid carrier. It is used as a pesticide. It is a water emulsifiable liquid. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

Use natural barriers or oil spill control booms to limit spill motion
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**DIELDRIN (AGRICULTURAL INSECTICIDES, NEC, 4941135
OTHER THAN LIQUID)**

**ORM-A NA2761
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)**

Dieldrin is a light tan solid. It is used as a pesticide. It is a wettable powder. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**DIELDRIN (INSECTICIDES, OTHER THAN 4941133
AGRICULTURAL, NEC)**

**ORM-A NA2761
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)**

Dieldrin is a light tan solid or the solid dissolved in a liquid carrier. It is used as a pesticide. It is a wettable powder or water emulsifiable liquid. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DIESEL FUEL (See FUEL OIL 4915113)

**DIETHYL BENZENE (COMBUSTIBLE LIQUID, N.O.S.) 4913135
COMBUSTIBLE LIQUID NA1993**

Diethylbenzene is a clear colorless liquid with an aromatic odor. It has a flash point of 140 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

Continued on next page

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

DIETHYL DICHLOROSILANE
FLAMMABLE LIQUID, CORROSIVE

4907609
UN1767

Diethyl dichlorosilane is a colorless liquid with a pungent odor. It has a flash point of 77 deg. F. It is readily decomposed by water to hydrochloric acid with evolution of heat. It is corrosive to metals and tissue. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use "alcohol" foam, carbon dioxide or dry chemical
- Do not use water on material itself
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

DIETHYL KETONE
FLAMMABLE LIQUID

4909150
UN1156

Diethyl ketone is a clear colorless liquid with an acetone-like odor. It has a flash point of 55 deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

DIETHYL PEROXYDICARBONATE, (NOT MORE THAN 27% IN SOLUTION)
ORGANIC PEROXIDE

4919251
UN2175

Diethyl peroxydicarbonate, (not more than 27% in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DIETHYL SULFATE (CORROSIVE LIQUID, N.O.S.)
CORROSIVE MATERIAL, ACIDIC

4933320
UN1760

Diethyl sulfate is a clear colorless liquid with a peppermint odor. It will burn though it may require some effort to ignite. It is heavier than water and is slowly decomposed by water to ethyl alcohol, a flammable liquid, and ethyl sulfate. It is corrosive to metals and tissue.

If material on fire or involved in fire

- Use dry chemical, carbon dioxide, or dry sand
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

DIETHYLAMINE 4907815
FLAMMABLE LIQUID, CORROSIVE, BASIC UN1154
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Diethylamine is a clear colorless liquid with an ammonia like odor. It has a flash point of -15 deg. F. It is a respiratory irritant and is corrosive to the eyes and skin. It is lighter than water and soluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

It weighs 5.9 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents
- Neutralize with sodium bisulfate (nahso4)

Environmental considerations—water spill

- Add sodium bisulfate
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Vapor knockdown water is corrosive or toxic and should be diked for containment

DIETHYLAMINOETHANOL (COMBUSTIBLE LIQUID, N.O.S.) 4913186

COMBUSTIBLE LIQUID

NA1993

Diethylaminoethanol is a clear colorless liquid, it is used to make other chemicals. It has a flash point of 140 deg. F. It is lighter than water and is soluble in water, its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

If material involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- For scattered burning fuses, smother in dirt

If material not on fire and not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Keep upwind
- Avoid breathing vapors
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

DIETHYLENETRIAMINE (CORROSIVE LIQUID, N.O.S.) 4935631
CORROSIVE MATERIAL, BASIC UN1760

Diethylenetriamine is a yellow colored liquid with an ammonia-like odor. It is used as a solvent for plastics and dyes and in chemical synthesis. It is lighter than water and soluble in water. It will burn though it may take some effort to ignite. It is corrosive to metals and tissue. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

**DIETHYLHYDROXYLAMINE (COMBUSTIBLE LIQUID, 4913185
N.O.S.)**

COMBUSTIBLE LIQUID NA1993

Diethylhydroxylamine is a clear colorless liquid. It is used in photography and as a corrosion inhibitor. It has a flash point of 113 deg. F. It is lighter than water and is soluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid breathing vapors
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

**1,1-DIFLUORO-1-CHLOROETHANE (See
DIFLUOROMONOCHELOROETHANE 4904552)**

**DIFLUOROETHANE 4905716
FLAMMABLE GAS UN1030**

Difluoroethane is colorless, odorless gas shipped as a liquefied gas under its vapor pressure. Contact with the liquid can cause frostbite. It is easily ignited. Its vapors are heavier than air and a flame can travel back to the source of leak very easily. This leak can be either a liquid or vapor leak. It can asphyxiate by the displacement of air. Under fire conditions the cylinders or tank cars may violently rupture and rocket.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Wear self-contained breathing apparatus when fighting fires involving this material
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
- If material leaking (not on fire), downwind evacuation must be considered

**DIFLUOROMONOCHELOROETHANE
FLAMMABLE GAS**

**4905719
UN2517**

Difluoromonochloroethane is a colorless gas shipped as a liquefied gas under its vapor pressure. Contact with the liquid can cause frostbite. It is easily ignited. Its vapor is heavier than air and a flame can travel back to the source of leak very easily. The leak can either be a liquid or vapor leak. It can asphyxiate by the displacement of air. Under fire conditions the cylinders or tank cars may violently rupture or rocket.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Wear self-contained breathing apparatus when fighting fires involving this material
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
- If material leaking (not on fire), downwind evacuation must be considered

**DIFLUOROPHOSPHORIC ACID, ANYDROUS 4930214
CORROSIVE MATERIAL, ACIDIC UN1768**

Difluorophosphoric acid is a colorless fuming liquid. It is soluble in water. It is corrosive to metals and tissue.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

**2,2-DIHYDROPEROXY PROPANE, (NOT MORE THAN 4919253
25% WITH INERT ORGANIC SOLID) UN2178
ORGANIC PEROXIDE**

2,2-dihydroperoxy propane, (not more than 25% with inert organic solid) is a white solid. It is used to manufacture paints, plastics, and rubber. It is slightly soluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DIHYDROPYRAN

4908240

FLAMMABLE LIQUID

UN2376

Dihydropyran is a clear colorless liquid with an ethereal odor. It has a flash point of 0 deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

DIISOBUTYL KETONE

4913140

COMBUSTIBLE LIQUID

UN1157

Diisobutyl ketone is a clear colorless liquid. It has a flash point of 140 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog

Solid streams of water may spread fire

Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

DIISOBUTYLAMINE (FLAMMABLE LIQUID, N.O.S.)

4909177

FLAMMABLE LIQUID

UN1993

Diisobutylamine is a clear colorless liquid with a fish like odor. It has a flash point of 85 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

DIISOBUTYL CARBINOL (COMBUSTIBLE LIQUID, N.O.S.)

4913119

COMBUSTIBLE LIQUID

UN1987

Diisobutylcarbinol is a colorless liquid. It has a flash point of 162 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

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Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

DIISOBUTYLENE (FLAMMABLE LIQUID, N.O.S.) 4909209 FLAMMABLE LIQUID UN1993

Diisobutylene is a clear colorless liquid with a petroleum-like odor is used in the manufacture of other chemicals. It has a flash point of 10 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

DIISOBUTYRYL PEROXIDE, (NOT MORE THAN 52% IN SOLUTION) 4919255

ORGANIC PEROXIDE UN2182

Diisobutyl peroxide, (not more than 52% in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DIISOCTYL ACID PHOSPHATE 4933325 CORROSIVE MATERIAL, ACIDIC, COMBUSTIBLE UN1902

Diisooctyl acid phosphate is a colorless liquid. It will burn though it may require some effort to ignite. It is corrosive to metals and tissue

If material on fire or involved in fire

- Use dry chemical, carbon dioxide, or dry sand
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

DIISOPROPYL ETHER 4908195 FLAMMABLE LIQUID UN1159

Diisopropyl ether is a clear colorless liquid with an ethereal odor. It has a flash point of -18 deg. F. On prolonged standing in contact with air peroxides may form which may explode spontaneously or if heated. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

DIISOPROPYLAMINE FLAMMABLE LIQUID

4909148
UN1158

Diisopropylamine is a clear colorless liquid with an ammonia-like odor. It is used to make other chemicals. It has a flash point of 30 deg. F. It is lighter than water and is soluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

DIISOPROPYLBENZENE HYDROPEROXIDE SOLUTION 4919130 (NOT OVER 60% PEROXIDE)

ORGANIC PEROXIDE UN2171

Diisopropylbenzene hydroperoxide is a colorless to pale yellow liquid. It must be shipped in a non-volatile solvent not exceeding 60% concentration. It may take some effort to ignite but once ignited it burns with increasing vigor as the fire progresses. It strongly supports the burning of combustible materials. Under prolonged exposure to heat or fire containers of material can explode. Chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles

- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DIISOTRIDECYL PEROXYDICARBONATE, (TECHNICALLY PURE)

4919257

ORGANIC PEROXIDE

UN2889

Diisotridecyl peroxydicarbonate, (technically pure) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DIMETHYL CARBONATE FLAMMABLE LIQUID

4909154
UN1161

Dimethyl carbonate is a clear, colorless liquid with a pleasant odor. It is used to make other chemicals and as a special purpose solvent. It has a flash point of 66 deg. F. It is heavier than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

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If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**DIMETHYL CHLOROTHIOPHOSPHATE 4933319
CORROSIVE MATERIAL, POISONOUS NA2922**

Dimethyl chlorothiophosphate is a colorless to light amber liquid. It is used to make other chemicals, as a corrosion inhibitor, as a fuel and lubricant additive, and for many other uses. It is slightly soluble in water. It is corrosive to metals and tissue. It is toxic by inhalation, skin absorption, and/or ingestion.

If material involved in fire

Use dry chemical, carbon dioxide, or dry sand
Do not use water on material itself
If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
Use water spray to absorb vapors
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors
Do not use water on material itself
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

**DIMETHYL ETHER 4905725
FLAMMABLE GAS UN1033**

Dimethyl ether is a colorless gas with a faint ethereal odor. It is shipped as a liquefied gas under its vapor pressure. Contact with the liquid can cause frostbite. It is easily ignited. Its vapors are heavier than air and a flame can flash back to the source of leak very easily. The leak can either be liquid or vapor leak. It can asphyxiate by the displacement of air. Under fire conditions the cylinder or tank car may violently rupture.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Wear protective gloves and goggles
Do not handle broken packages without protective equipment
Approach fire with caution

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
If material leaking (not on fire), downwind evacuation must be considered

**DIMETHYL HYDRAZINE, UNSYMMETRICAL 4906210
FLAMMABLE LIQUID, POISONOUS, CORROSIVE UN1163
THERMALLY UNSTABLE**

Unsymmetrical dimethylhydrazine is a clear colorless liquid with an ammonia like odor. It is used as a rocket propellant, to make other chemicals, and for many other uses. It has a flash point of 0. deg. F. It is flammable over a wide range of vapor-air concentrations. It may ignite spontaneously in contact with oxidizers. The vapors are toxic and attack the eyes and respiratory system. The liquid is corrosive to the skin. It is lighter than water and soluble in water. The vapors are heavier than air. Prolonged exposure of containers of the material to fire or heat may result in their violent rupturing and rocketing due to the decomposition of the material. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 5000 feet
If material leaking (not on fire), downwind evacuation must be considered

**DIMETHYL PHOSPHOROCHLORIDOTHIOATE (See
DIMETHYL CHLOROTHIOPHOSPHATE 4933319)****DIMETHYL SULFATE 4933322
CORROSIVE MATERIAL, ACIDIC, COMBUSTIBLE UN1595**

Dimethyl sulfate is a colorless oily liquid, odorless to a faint onionlike odor. It is a combustible liquid and has a flash point of 182 deg. F. It is slightly soluble in water and decomposed by water to give sulfuric acid with evolution of heat. It is corrosive to metals and tissue.

If material on fire or involved in fire

- Use dry chemical, carbon dioxide, or dry sand
 - Do not use water on material itself
 - If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
 - Use water spray to absorb vapors
 - Cool all affected containers with flooding quantities of water
 - Apply water from as far a distance as possible
- If material not on fire and not involved in fire**
- Keep sparks, flames, and other sources of ignition away
 - Keep material out of water sources and sewers
 - Build dikes to contain flow as necessary
 - Use water spray to knock-down vapors
 - Do not use water on material itself
 - Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

**DIMETHYL SULFIDE
FLAMMABLE LIQUID**

4908151
UN1164

Dimethyl sulfide is a clear colorless to straw colored liquid with a disagreeable odor. It has a flash point of less than 0. deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

**2,5-DIMETHYL-2,5-DI-(BENZOYLPEROXY) HEXANE,
(NOT MORE THAN 82% WITH INERT SOLID)
ORGANIC PEROXIDE**

4919260

UN2173

2,5-dimethyl-2,5-di-(benzoylperoxy) hexane, (not more than 82% with inert solid) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**2,5-DIMETHYL-2,5-DI-(BENZOYLPEROXY) HEXANE,
(TECHNICALLY PURE)
ORGANIC PEROXIDE**

4919259

UN2172

2,5-dimethyl-2,5-di-(benzoylperoxy) hexane, (technically pure) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Continued on next page

Personnel protection

Avoid breathing dusts, and fumes from burning material
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 Wear self-contained breathing apparatus when fighting fires involving this material
 If contact with the material anticipated, wear full protective clothing
 Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

If material on fire or involved in fire

Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical
 Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Keep spilled material wet
 Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 Wear self-contained breathing apparatus when fighting fires involving this material
 If contact with the material anticipated, wear full protective clothing
 Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

2,5-DIMETHYL-2,5-DI-(TERT-BUTYLPEROXY) HEXANE, 4919263
(NOT MORE THAN 52% WITH INERT SOLID)
ORGANIC PEROXIDE UN2156

2,5-dimethyl-2,5-di-(tert-butylperoxy) hexane, (not more than 52% with inert solid) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical
 Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Keep spilled material wet
 Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 Wear self-contained breathing apparatus when fighting fires involving this material
 If contact with the material anticipated, wear full protective clothing
 Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

2,5-DIMETHYL-2,5-DI-(TERT-BUTYLPEROXY) HEXANE, 4919262
(TECHNICALLY PURE)
ORGANIC PEROXIDE UN2155

2,5-dimethyl-2,5-di-(tert-butylperoxy) hexane, (technically pure) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

2,5-DIMETHYL-2,5-DI-(TERT-BUTYLPEROXY)HEXYNE- 4919265
3, (NOT MORE THAN 52% WITH INERT SOLID)
ORGANIC PEROXIDE UN2159

2,5-dimethyl-2,5-di-(tert-butylperoxy)hexyne-3, (not more than 52% with inert solid) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical
 Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Keep spilled material wet
 Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 Wear self-contained breathing apparatus when fighting fires involving this material
 If contact with the material anticipated, wear full protective clothing
 Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

2,5-DIMETHYL-2,5-DI-(TERT-BUTYLPEROXY)HEXYNE-3, (TECHNICALLY PURE) 4919264

ORGANIC PEROXIDE UN2158

2,5-dimethyl-2,5-di-(tert-butylperoxy)hexyne-3, (technically pure) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

2,5-DIMETHYL-2,5-DI-(2-ETHYLHEXANOYLPEROXY)HEXANE, (TECHNICALLY PURE) 4919258

ORGANIC PEROXIDE UN2157

2,5-dimethyl-2,5-di-(2-ethylhexanoylperoxy) hexane, (technically pure) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

2,5-DIMETHYL-2,5-DIHYDROPEROXY HEXANE, (NOT MORE THAN 82% WITH WATER) 4919261

ORGANIC PEROXIDE UN2174

2,5-dimethyl-2,5-dihydroperoxy hexane, (not more than 82% with water) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DIMETHYLAMINE, ANHYDROUS 4905510
FLAMMABLE GAS, CORROSIVE UN1032
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Dimethylamine anhydrous is a colorless gas with a fish-like odor at low concentrations changing to ammonia-like odor at higher concentrations. It is used to make other chemicals, as a solvent, as a solvent, and for many other uses. It is shipped as liquefied gas under its vapor pressure. Contact with the liquid can cause frostbite or chemical type burns. The gas itself is corrosive and it is soluble in water to form flammable corrosive solutions. It is easily ignited. Its vapor is heavier than air and a flame can flash back to the source of leak very easily. It can asphyxiate by the displacement of air. Under fire conditions the cylinders or tank cars may rupture and rocket. Toxic oxides of nitrogen are produced during combustion of this material.

It weighs 5.5 pounds per gallon.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

Continued on next page

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
- If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents
- Neutralize with sodium bisulfate (nahso4)

Environmental considerations—water spill

- Use natural barriers or oil spill control booms to limit spill motion
- Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material
- Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Add sodium bisulfate
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Vapor knockdown water is corrosive or toxic and should be diked for containment

Wear full protective clothing

- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents
- Apply "universal" gelling agent to immobilize spill
- Neutralize with sodium bisulfate (nahso4)

Environmental considerations—water spill

- Add sodium bisulfate
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Vapor knockdown water is corrosive or toxic and should be diked for containment

DIMETHYLAMINOETHYL METHACRYLATE 4912218
(COMBUSTIBLE LIQUID, N.O.S.)
COMBUSTIBLE LIQUID NA1993
POLYMERIZABLE

Dimethylaminoethyl methacrylate is a clear colorless liquid. It is used to make plastics, in textiles, and for many other uses. its vapors are irritating to eyes and mucous membranes. It has a flash point of 165 deg. F. It is lighter than water and is insoluble in water. its vapor are heavier than air. If it becomes contaminated or is subject to heat, it may polymerize. if this polymerization takes place inside a container, the container may violently rupture. toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

DIMETHYLAMINOETHANOL (COMBUSTIBLE LIQUID, N.O.S.) 4913184
COMBUSTIBLE LIQUID NA1993

Dimethylaminoethanol is a clear colorless liquid having a fish-like odor. it is used to make other chemicals. If has a flash point of 105 deg. F. It is lighter than water and is soluble in water. its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

DIMETHYLAMINE, AQUEOUS SOLUTION 4907820
FLAMMABLE LIQUID, CORROSIVE, BASIC UN1160
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Dimethylamine, aqueous solution is the solution of dimethylamine, a gas, in water and has an odor ranging from a fish-like to ammonia-like as the vapor concentration increases. A 25% solution has a flash point of 54 deg. F. It is corrosive to the skin and eyes. The solution is lighter than water and soluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

It weighs 7.3 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Solid streams of water may be ineffective
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

2,3-DIMETHYLBUTANE

4908275

FLAMMABLE LIQUID

UN2457

2, 3-dimethylbutane is a clear colorless liquid with a petroleum odor. It has a flash point of -20 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

1,4-DIMETHYLCYCLOHEXANE

4909156

FLAMMABLE LIQUID

UN2263

1,4-dimethylcyclohexane is a clear, colorless liquid with a petroleum like odor. It has a flash point of 51 to 61 deg. F. It is lighter than water and is insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

DIMETHYLDICHLOROSILANE

4907610

FLAMMABLE LIQUID, CORROSIVE, ACIDIC

UN1162

Dimethyldichlorosilane is a colorless fuming liquid with a pungent odor. It has a flash point of 16 deg. F. Vapor and liquid can cause burns. It is heavier than water and is decomposed by water to form hydrochloric acid, a corrosive material. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use "alcohol" foam, carbon dioxide or dry chemical
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Do not use water on material itself
If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors
Do not use water on material itself
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

DIMETHYLETHYLAMINE (FLAMMABLE LIQUID, N.O.S.)

4907825

FLAMMABLE LIQUID

UN1993

Dimethylethylamine is a clear colorless liquid with a strong odor that can vary from ammonia to fish-like. It is used in the manufacture of other chemicals. It has a flash point of 10 deg. F. Its vapors are irritating to the eyes and mucous membranes. It is lighter than water and soluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Use water spray to absorb vapors

Continued on next page

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

DIMETHYLHEXANE DIHYDROPEROXIDE, (WITH 18% OR MORE WATER) 4919140

ORGANIC PEROXIDE UN2174

Dimethylhexane dihydroperoxide solution is a slurry or sludge of white crystals. Wet, the material requires some effort to ignite, but once ignited it burns very rapidly. Dry, the material is very easily ignited. In either condition it strongly supports the burning of combustible materials. Under prolonged exposure to heat or fire containers of the material can explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DIMYRISTYL PEROXYDICARBONATE, (NOT MORE THAN 22%, STABLE DISPERSION, IN WATER) 4919270

ORGANIC PEROXIDE UN2892

Dimyristyl peroxydicarbonate, (not more than 22%, stable dispersion, in water) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DIMYRISTYL PEROXYDICARBONATE, (TECHNICALLY PURE) 4919269

ORGANIC PEROXIDE UN2595

Dimyristyl peroxydicarbonate, (technically pure) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

DINITROBENZENE, SOLID OR DINITROBENZOL, SOLID 4921421
POISON B UN1597
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Dinitrobenzene, solid is a white or yellow crystalline solid. It is slightly soluble in water. It is toxic by skin absorption and by inhalation (dust, etc.). It is combustible. Prolonged exposure of the material to fire or heat may result in the spontaneous decomposition of the material with a resultant explosion. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DINITROBENZOL, SOLUTION 4921422
POISON B UN1597
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Dinitrobenzol, solution is the colorless or yellow solution of dinitrobenzene in a suitable solvent. The flammability of the solution depends on the nature of the solvent. The material itself is combustible. It is toxic by skin absorption and inhalation. Prolonged exposure to fire or heat may result in spontaneous decomposition with a resultant explosion. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents

Environmental considerations—water spill

- Use natural barriers or oil spill control booms to limit spill motion
- Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material
- Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DINITROCHLOROBENZOL, SOLID OR DINITROCHLOROBENZENE 4921424
POISON B UN1577

Dinitrochlorobenzol, solid is a colorless to yellow crystalline solid with an almond like odor. It is insoluble in water. It is combustible though it may require some effort to ignite. It is toxic by skin absorption or inhalation (dust, etc.). Prolonged exposure to fire or heat may result in spontaneous decomposition with a resultant explosion. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

DINITROPHENOL (FLAMMABLE SOLID, POISONOUS, N.O.S.) 4916626
FLAMMABLE SOLID, POISONOUS UN1992
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Dinitrophenol is a yellow crystalline solid, shipped water wet with at least 15 % water. It is used to make dyes, as a lumber preservative, and to make explosives. When not water wet it is a high explosive. Dry, the material is easily ignited and it will burn very vigorously. The wet material can burn though it may require some effort to ignite. It is slightly soluble in water. Toxic oxides of nitrogen are produced in fires involving this material.

If material on fire or involved in fire

- Dangerously explosive
- Flood with water
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

Continued on next page

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Do not attempt to sweep up dry material

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 5000 feet

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Remove trapped material with suction hoses
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DINITROPHENOL SOLUTION

4921425

POISON B

UN1599

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Dinitrophenol solution is a yellow colored liquid of the yellow crystalline material dissolved in a suitable solvent. The material itself is very slightly soluble in water. The flammability of the solution depends on the nature of the solvent. Dinitrophenol itself is combustible though it may require some effort to ignite. It is toxic by skin absorption and inhalation. Prolonged exposure to fire or heat may result in the spontaneous decomposition and heating with a resultant explosion. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- Use natural barriers or oil spill control booms to limit spill motion
- Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material
- Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DINITROTOLUENE, LIQUID

4963120

ORM-E

UN1600

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Dinitrotoluene, liquid is a yellow colored liquid. It is used to make dyes, explosives, and other chemicals. It is insoluble in water. It is combustible though it may take some effort to ignite. Toxic oxides of nitrogen are produced during combustion of this material.

It weighs 10.6 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors or dusts
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Apply "universal" gelling agent to immobilize spill

Environmental considerations—water spill

- Use natural barriers or oil spill control booms to limit spill motion
- Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material
- Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms
- Remove trapped material with suction hoses
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DINITROTOLUENE, SOLID

4963115

ORM-E

UN1600

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Dinitrotoluene is a yellow crystalline solid. It is used to make dyes, explosives, and other chemicals. It is insoluble in water. It is combustible though it may take some effort to ignite. Toxic oxides of nitrogen are produced during the combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors or dusts
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- Remove trapped material with suction hoses
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DIOXANE

4909155

FLAMMABLE LIQUID

UN1165

Dioxane is a clear colorless liquid with a faint ethereal odor. It has a flash point of 55 deg. F. It is slightly heavier than water and is soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

DIOXOLANE

4909156

FLAMMABLE LIQUID

UN1166

Dioxolane is a clear colorless liquid. It has a flash point of 35 deg. F. It is lighter than water and is soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

DIPHENYL DICHLOROSILANE

4934235

CORROSIVE MATERIAL, ACIDIC

UN1769

Diphenyl dichlorosilane is a colorless liquid with a pungent odor. Material will burn though it may require some effort to ignite. It is decomposed by water to hydrochloric acid with evolution of heat. It is corrosive to metals and tissue.

If material on fire or involved in fire

- Use dry chemical, carbon dioxide, or dry sand
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

DIPHENYL METHYL BROMIDE, SOLID

4936220

CORROSIVE MATERIAL

UN1770

Diphenyl methyl bromide, solid is a white crystalline solid. It is insoluble in cold water and is decomposed by hot water producing hydrobromic acid, a corrosive material. It is corrosive to tissue.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing vapors
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

DIPHENYL METHYL BROMIDE, SOLUTION 4936225
CORROSIVE MATERIAL UN1770

Diphenyl methyl bromide, solution is the white crystalline solid dissolved in some solvent. The combustibility of the solution depends on the solvent used. Diphenyl methyl bromide is insoluble in cold water and is decomposed by hot water producing hydrobromic acid, a corrosive material. The solution is corrosive to metals and tissue.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

DIPHENYLAMINECHLOROARSINE 4925230
IRRITATING MATERIAL UN1698

Diphenylaminechloroarsine is in the form of yellow crystals. The vapors of this material are very irritating to the eyes and mucous membranes and are also nauseating.

If material on fire or involved in fire

Use water in flooding quantities as fog

Use "alcohol" foam, carbon dioxide or dry chemical

Cool all affected containers with flooding quantities of water

Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

DIPHENYLCHLORARSINE (IRRITATING AGENT, N.O.S.) 925240

IRRITATING MATERIAL NA1893

Diphenylchloroarsine is in the form of colorless crystals if pure otherwise a brown oily liquid. The vapors of the material are extremely irritating to the eyes and mucous membranes.

If material on fire or involved in fire

Use water in flooding quantities as fog

Use "alcohol" foam, carbon dioxide or dry chemical

Cool all affected containers with flooding quantities of water

Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

Evacuation

If material leaking (not on fire), downwind evacuation must be considered

DICUAT (AGRICULTURAL INSECTICIDES, NEC, LIQUID) 4963342

ORM-E NA2761
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Diquat is a yellow crystalline solid dissolved in a liquid carrier. It is used as a herbicide. It is a water emulsifiable liquid. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Keep upwind

Wear boots, protective gloves, and goggles

Avoid breathing vapors or dusts

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DICUAT (AGRICULTURAL INSECTICIDES, NEC, OTHER THAN LIQUID) 4963344

ORM-E NA2761
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Diquat is a yellow crystalline solid. It is used as a herbicide. It is a wettable powder. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DIQUAT (INSECTICIDES, OTHER THAN AGRICULTURAL, NEC)

4963339

ORM-E

NA2781

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Diquat is a yellow crystalline solid or the solid dissolved in a liquid carrier. It is used as a herbicide. It is a wettable powder or water emulsifiable liquid. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DISINFECTANT, LIQUID POISON B

4923910

UN1801

Disinfectant, liquid is a variable colored liquid. It is generally soluble in water. It is toxic by ingestion, inhalation (vapors, mists, etc.), or by skin absorption.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

DISINFECTANT, LIQUID CORROSIVE MATERIAL

4936561

UN1903

Disinfectant, liquid is a variable colored liquid. It is generally soluble in water. It may be combustible though it may require some effort to ignite. It may be toxic by ingestion, inhalation (vapors, mists, etc.) or by skin absorption. It is corrosive to metals and/or tissue.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use dry chemical, carbon dioxide, or dry sand
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- If material not on fire and not involved in fire
- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

DISINFECTANT, LIQUID, N.O.S. COMBUSTIBLE LIQUID

4915115

NA1993

Disinfectant, liquid, n.o.s. is a variable colored liquid. It has a flash point between 100 and 199 deg. F. Although the material is not classed as a poison b, breathing of the vapors or skin contact with the liquid should be avoided. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- If material not on fire and not involved in fire
- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

DISINFECTANT, SOLID 4923911
POISON B UN1601

Disinfectant, solid is a variable colored solid. It is generally soluble in water. It is toxic by ingestion, inhalation (dusts), or by skin absorption.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Use foam, carbon dioxide or dry chemical
- Cool all affected containers with flooding quantities of water

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

DISPERSANT GASES, NEC (COMPRESSED GAS, N.O.S.) 4904536

NONFLAMMABLE GAS UN1956

Dispersant gases, nec are materials which are shipped in containers under pressure. They may be mixtures consisting of nonflammable gas(es) (and flammable gas(es)) with the mixture being nonflammable. The mixture may separate with the flammable gas setting into low areas, or the nonflammable gas setting into low areas. It may asphyxiate by the displacement of air. It may only be shipped in cylinders. Toxic gases can be produced in fires involving this material.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Attempt to stop leak if without hazard

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment

DISPERSANT GASES, NEC, FLAMMABLE (COMPRESSED GAS, N.O.S.) 4905727

FLAMMABLE GAS UN1954

Dispersant gases are colorless gases shipped as liquefied gases under its vapor pressure. Contact with the liquid can cause frostbite. It is easily ignited. Its vapors are heavier than air and a flame can flash back to the source of leak very easily. This leak may either be a liquid or vapor leak. It can asphyxiate by the displacement of air. Under fire conditions the cylinder or tank can may violently rupture and rocket.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

DISULFOTON (AGRICULTURAL INSECTICIDES, NEC, LIQUID) 4921511

POISON B NA2783
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Disulfoton is a pale yellow liquid. It is used as a pesticide. It is a water emulsifiable liquid. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

- Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

DISULFOTON (AGRICULTURAL INSECTICIDES, NEC, OTHER THAN LIQUID) 4921512

POISON B NA2783
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Disulfoton is a pale yellow liquid absorbed on a dry carrier. It is used as a pesticide. It is a wettable powder. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DISULFOTON MIXTURE, DRY (AGRICULTURAL INSECTICIDES, NEC, OTHER THAN LIQUID)

4921508

POISON B

NA2783

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Disulfoton mixture, dry is the pale yellow liquid absorbed on a dry carrier. It is used as a pesticide. It is a wettable powder. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DISULFOTON MIXTURE, LIQUID (AGRICULTURAL INSECTICIDES, NEC, LIQUID)

4921509

POISON B

NA2783

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Disulfoton mixture, liquid is a pale yellow liquid. It is used as a pesticide. It is a water emulsifiable liquid. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

Continued on next page

DISULFOTON (INSECTICIDES, OTHER THAN AGRICULTURAL, NEC)

4921513

POISON B

NA2783

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Disulfoton is a pale yellow liquid or the liquid absorbed on a dry carrier. It is used as a pesticide. It is a wettable powder or water emulsifiable liquid. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash or cement powder

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear full protective clothing
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

DITHIOCARBAMATE PESTICIDE, LIQUID, N.O.S. 4921632
 (COMPOUNDS AND PREPARATIONS)
 (AGRICULTURAL INSECTICIDES, NEC, LIQUID)

POISON B UN2771

Dithiocarbamate pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The carrier may burn though it may require some effort to ignite. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear full protective clothing
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

DITHIOCARBAMATE PESTICIDE, LIQUID, N.O.S. 4921631
 (COMPOUNDS AND PREPARATIONS)
 (INSECTICIDES, OTHER THAN AGRICULTURAL, NEC)

POISON B

UN2771

Dithiocarbamate pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The carrier may burn though it may require some effort to ignite. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear full protective clothing
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

DITHIOCARBAMATE PESTICIDE, LIQUID, N.O.S. 4910532
 (COMPOUNDS AND PREPARATIONS)
 (AGRICULTURAL INSECTICIDES, NEC, LIQUID)

FLAMMABLE LIQUID UN2772

Dithiocarbamate pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The primary hazard of this material is the flammability of the carrier. It has a flash point below 100 deg. F. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wear self-contained breathing apparatus when fighting fires involving this material

DITHIOCARBAMATE PESTICIDE, LIQUID, N.O.S. 4910531
(COMPOUNDS AND PREPARATIONS)
(INSECTICIDES, OTHER THAN AGRICULTURAL,
NEC)

FLAMMABLE LIQUID UN2772

Dithiocarbamate pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The primary hazard of this material is the flammability of the carrier. It has a flash point below 100 deg. F. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wear self-contained breathing apparatus when fighting fires involving this material

DITHIOCARBAMATE PESTICIDE, SOLID, N.O.S. 4921633
(COMPOUNDS AND PREPARATIONS)
(INSECTICIDES, OTHER THAN AGRICULTURAL,
NEC)

POISON B UN2771

Dithiocarbamate pesticide is a solid or a liquid absorbed on a dry carrier. It is a wettable powder. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

DITHIOCARBAMATE PESTICIDE, SOLID, N.O.S. 4921634
(COMPOUNDS AND PREPARATIONS)
(AGRICULTURAL INSECTICIDES, NEC, OTHER
THAN LIQUID)

POISON B UN2771

Dithiocarbamate pesticide is a solid or a liquid absorbed on a dry carrier. It is a wettable powder. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

DIURON (AGRICULTURAL INSECTICIDES, NEC, LIQUID) 4962620

ORM-E NA2767
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Diuron is a white crystalline solid dissolved in a liquid carrier. It is used as a herbicide. It is a water emulsifiable liquid. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DIURON (AGRICULTURAL INSECTICIDES, NEC, OTHER THAN LIQUID)

4962621

ORM-E ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

NA2767

Diuron is a white crystalline solid. It is used as a herbicide. It is a wettable powder. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DIURON (INSECTICIDES, OTHER THAN AGRICULTURAL, NEC)

4962622

ORM-E ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

NA2767

Diuron is a white crystalline solid or the solid dissolved in a liquid carrier. It is used as a herbicide. It is a wettable powder or water emulsifiable liquid. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**DIVINYL ETHER
FLAMMABLE LIQUID**

4908185

UN1167

Divinyl ether is a clear colorless liquid. It has a flash point of less than -22 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

**DODECYL TRICHLOROSILANE
CORROSIVE MATERIAL, ACIDIC**

4934240

UN1771

Dodecyl trichlorosilane is a colorless to yellow liquid with a pungent odor. Material will burn though it may take some effort to ignite. It is decomposed by moisture or water to hydrochloric acid with evolution of heat. It is corrosive to metals and tissue.

If material on fire or involved in fire

Use dry chemical, carbon dioxide, or dry sand
Do not use water on material itself
If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
Use water spray to absorb vapors
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors
Do not use water on material itself
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

**DODECYLBENZENESULFONIC ACID
CORROSIVE MATERIAL
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)**

4931426

NA2584

Dodecylbenzenesulfonic acid is a colorless liquid. It is used to make detergents. It is soluble in water. It is corrosive to metals and tissue.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

DRUGS OR MEDICINES, N.O.S.

4917376

FLAMMABLE SOLID

NA1325

Drugs or medicines, n.o.s. is the proper shipping name of any solid material, other than one classed as an explosive, or specifically listed by name in the list of hazardous materials which is liable under conditions incident to transportation to cause fires through friction, absorption of moisture, spontaneous chemical changes as a result of retained heat from the manufacturing or processing of the solid, or which can be readily ignited by external sparks or flame and when so ignited burns vigorously and persistently. Try to ascertain the exact name of the material.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of fire

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

DRUGS OR MEDICINES, N.O.S.

4918410

OXIDIZER

NA1479

Drugs or medicines, n.o.s. are various materials which have the property of accelerating the burning of combustible material. These materials may not burn by themselves. Prolonged exposure of these materials and/or their containers to fire or heat may result in an explosion. These materials may only be shipped in containers of 55 gallon capacity or less.

If material on fire or involved in fire

Flood with water
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
If material not on fire and not involved in fire
Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
Approach fire with caution

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 1500 feet

DRUGS OR MEDICINES, N.O.S. (LIQUID)

4921427

POISON B

NA2810

Drugs or medicines, n.o.s. (liquid) are liquid or solution of solids materials which have the property of being toxic by ingestion, inhalation, or skin absorption. The liquid or solution may or may not burn depending on the nature of the material and/or the solvent of the solution.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If material leaking (not on fire), downwind evacuation must be considered

DRUGS OR MEDICINES, N.O.S. (SOLID)

4921496

POISON B

NA2811

Drugs or medicines, n.o.s. (solid) are pure materials or mixtures of two or more solids or liquids absorbed on a dry carrier. It has the property of being toxic by ingestion, inhalation (vapor dust, etc) or skin absorption.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Continued on next page

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

DRUGS, N.O.S.

4915191

COMBUSTIBLE LIQUID

NA1993

Drugs, n.o.s. are those drugs with the property of having a flash point between 100 and 199 deg. F. They are generally lighter than water and soluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

DRUGS, N.O.S.

4910191

FLAMMABLE LIQUID

NA1993

Drugs, n.o.s. are those drugs with the property of having a flash point of less than 100 deg. F. They are generally lighter than water and soluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

DRUGS, N.O.S., LIQUID

4936581

CORROSIVE MATERIAL

NA1750

Drugs, n.o.s., liquid is the proper shipping name for various liquids having the property of being corrosive to steel or tissue. It may either be a simple liquid material or a solid material dissolved in a solvent. It may be combustible though requiring some effort to ignite. They may or may not be water soluble.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Solid streams of water may be ineffective
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

DRUGS, N.O.S., SOLID

4936582

CORROSIVE MATERIAL

NA1759

Drugs, n.o.s., solid is the proper shipping name for various colored solids having the property of being corrosive to tissue. They may or may not be water soluble.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
Use dry chemical, carbon dioxide, or dry sand
Do not use water on material itself

If large quantities of combustibles are involved, use water in flooding quantities as spray and fog

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

DRY CLEANER, LIQUID, OR LIQUID CLEANSER

4910148

(COMPOUND, CLEANING, LIQUID)

FLAMMABLE LIQUID

NA1993

Dry cleaner, liquid, or liquid cleanser is a variable colored liquid with a petroleum like odor. It has a flash point of less than 100 deg. F. It is lighter than water and generally insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

DRY CLEANER, LIQUID, OR LIQUID CLEANSER (COMPOUND, CLEANING, LIQUID) 4915146**COMBUSTIBLE LIQUID NA1993**

Dry cleaner, liquid, or liquid cleanser is a variable colored liquid with a petroleum like odor. It has a flash point between 100 and 199 deg. F. It is lighter than water and generally insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

DYE INTERMEDIATE, LIQUID 4935555
CORROSIVE MATERIAL UN2801

Dye intermediate, liquid is a variable colored material. It may be combustible though requiring some effort to ignite. It is corrosive to metals and/or tissue. It may or may not be water soluble.

If material on fire or involved in fire

Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Solid streams of water may be ineffective
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

ELECTRIC SQUIB 4903440
CLASS C EXPLOSIVE

Electric squib consists of a small tube or block containing a small amount of an ignition compound in contact with a bridge wire. The device may or may not have long lead wires attached to it.

If material on fire or involved in fire

Flood with water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Approach fire with caution
Avoid breathing dusts, and fumes from burning material
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 1500 feet

ELECTRIC WIRE SATURATING OR FINISHING COMPOUND, ASPHALT OR PITCH BASE (COMBUSTIBLE LIQUID, N.O.S.) 4915468**COMBUSTIBLE LIQUID NA1993**

Electric wire saturating or finishing compound asphalt or pitch base is a material containing a solvent having a closed cup flash point between 100 and 199 deg. F. The hazard of this material is combustibility.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

ELECTRIC WIRE SATURATING OR FINISHING COMPOUND, ASPHALT OR PITCH BASE (FLAMMABLE LIQUID, N.O.S.) 4910468**FLAMMABLE LIQUID UN1993**

Electric wire saturating or finishing compound asphalt or pitch base is a material containing a solvent having a closed cup flash point of less than 100 deg. F. The hazard of this material is flammability.

Continued on next page

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

ELECTRIC WIRE SATURATING OR FINISHING COMPOUND, PARAFFINE BASE (COMBUSTIBLE LIQUID, N.O.S.) 4915418

COMBUSTIBLE LIQUID NA1993

Electric wire saturating or finishing compound is a material containing a solvent having a closed cup flash point between 100 and 199 deg. F. The hazard is combustibility.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

ELECTRIC WIRE SATURATING OR FINISHING COMPOUND, PARAFFINE BASE (FLAMMABLE LIQUID, N.O.S.) 4910418

FLAMMABLE LIQUID UN1993

Electric wire saturating or finish compound is a material containing a solvent having a closed cup flash point of less than 100 deg. F. The hazard is flammability.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**ELECTROLYTE (ACID) BATTERY, FLUID 4930216
CORROSIVE MATERIAL, ACIDIC UN2796
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)**

Electrolyte (acid), battery fluid is a sulfuric acid-water solution. It is a clear colorless odorless liquid. It is soluble in water with release of heat. It is corrosive to metals and to tissue.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—air spill

Apply water spray or mist to knock down vapors
Vapor knockdown water is corrosive or toxic and should be diked for containment

ELECTROLYTE (ACID) PACKED WITH BATTERY CHARGER, RADIO CURRENT SUPPLY DEVICE OR ELECTRONIC EQUIPMENT AND ACTUATING DEVICE) 4938564

CORROSIVE MATERIAL, ACIDIC NA2797

Electrolyte (acid) packed with battery charger, radio current supply device or electronic equipment and actuating devices consist of containers of electrolyte (acid) packed in the same outside shipping container with battery charger, radio current supply device or electronic equipment and actuating devices. The electrolyte (acid) is soluble in water with evolution of heat. It is corrosive to metals and tissue.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

ELECTROLYTE (ACID) PACKED WITH DRY STORAGE BATTERY 4930217**CORROSIVE MATERIAL****NA2797**

Electrolyte (acid) packed with dry storage battery is the dry (empty) storage battery and the electrolyte (acid) in a container packaged together in the same outside container. The electrolyte (acid) is a sulfuric acid-water solution. It is a clear colorless liquid. It is soluble in water with release of heat. It is corrosive to metals and tissue.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

EMBEDDING CEMENT, NEC (CEMENT, LIQUID, N.O.S.) 4910448
FLAMMABLE LIQUID NA1133

Embedding cement nec is a solution of various gums or resins in various solvents. The liquids are generally quite thick and may range from clear colorless to black "tars". The flash point of the cement depends on the solvents used but it will be less than 100 deg. F. The hazard is flammability.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

EMBEDDING CEMENT, NEC (CEMENT, LIQUID, N.O.S.) 4915448
COMBUSTIBLE LIQUID NA1133

Embedding cement nec is a solution of various gums or resins in various solvents. The liquids are generally quite thick and may range from clear colorless to black "tars." the flash point of the cement depends on the solvents used but it will be between 100 and 199 deg. F. The hazard is combustibility.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ENAMEL (ENAMEL OTHER THAN WATCH DIAL) 4910176
FLAMMABLE LIQUID UN1263

Enamel or watch dial may contain a flammable solvent. Its flash point is 100 deg. F. or lower. The hazard is that of flammability.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ENAMEL (ENAMEL OTHER THAN WATCH DIAL) 4915176
COMBUSTIBLE LIQUID UN1263

Enamel is a variable colored liquid which may contain a combustible solvent. Its flash point is between 100 and 199 deg. F. The hazard is that of combustibility.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

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If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ENAMEL WHITENING COMPOUNDS (COMBUSTIBLE LIQUID, N.O.S.) 4915177

COMBUSTIBLE LIQUID NA1993

Enamel whitening compounds are clear colorless to white liquids. They have a flash point between 100 and 199 deg. F. They are generally lighter than water and insoluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ENAMEL WHITENING COMPOUNDS (FLAMMABLE LIQUID, N.O.S.) 4910177

FLAMMABLE LIQUID UN1993

Enamel whitening compounds are clear colorless to white liquids. They have a flash point of less than 100 deg. F. They are generally lighter than water and insoluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ENDOSULFAN (AGRICULTURAL INSECTICIDES, NEC, 4921516 LIQUID)

POISON B NA2761

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Endosulfan is a white solid dissolved in a liquid carrier. It is used as a pesticide. It is a water emulsifiable liquid. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

- Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

ENDOSULFAN (AGRICULTURAL INSECTICIDES, NEC, 4921517 OTHER THAN LIQUID)

POISON B NA2761

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Endosulfan is a white solid it is used as a pesticide, fungicide, or herbicide. It is a wettable powder. It is toxic by inhalation, skin containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

ENDOSULFAN (INSECTICIDES, OTHER THAN AGRICULTURAL, NEC)

4921518

POISON B

NA2761

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Endosulfan is a white solid or the solid dissolved in a liquid carrier. It is used as a pesticide, fungicide, or herbicide. It is a wettable powder or water emulsifiable liquid. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

ENDOSULFAN MIXTURE, LIQUID (AGRICULTURAL INSECTICIDES, NEC, LIQUID)

4921519

POISON B

NA2761

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Endosulfan mixture, liquid is the white solid dissolved in a liquid carrier. It is used as a pesticide. It is a water emulsifiable liquid. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

ENDRIN (AGRICULTURAL INSECTICIDES, NEC, LIQUID)

4921521

POISON B

NA2761

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Endrin is a white solid dissolved in a liquid carrier. It is used as a pesticide. It is a water emulsifiable liquid. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Continued on next page

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

- Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

ENDRIN (AGRICULTURAL INSECTICIDES, NEC, OTHER THAN LIQUID)

4921522

POISON B

NA2761

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Endrin is a white solid. It is used as a pesticide. It is wettable powder. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

- Use water in flooding quantities as fog

- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material

- Keep upwind

- Avoid bodily contact with the material

- Wear boots, protective gloves, and goggles

- Do not handle broken packages without protective equipment

- Wash away any material which may have contacted the body with copious amounts of water or soap and water

- Wear self-contained breathing apparatus when fighting fires involving this material

- If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

ENDRIN (INSECTICIDES, OTHER THAN AGRICULTURAL, NEC)

4921523

POISON B

NA2761

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Endrin is a white solid or the solid dissolved in a liquid carrier. It is used as a pesticide. It is a wettable powder or water emulsifiable liquid. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped

- Use water in flooding quantities as fog

- Solid streams of water may be ineffective

- Cool all affected containers with flooding quantities of water

- Apply water from as far a distance as possible

- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

- Keep material out of water sources and sewers

- Build dikes to contain flow as necessary

- Attempt to stop leak if without hazard

- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors

- Keep upwind

- Wear self-contained breathing apparatus

- Avoid bodily contact with the material

- Wear full protective clothing

- Do not handle broken packages without protective equipment

- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

- Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

ENDRIN MIXTURE, LIQUID (AGRICULTURAL INSECTICIDE, NEC, LIQUID)

4921520

POISON B

NA2761

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Endrin mixture, liquid is a white solid dissolved in a liquid carrier. It is used as a pesticide. It is a water emulsifiable liquid. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped

- Use water in flooding quantities as fog

- Solid streams of water may be ineffective

- Cool all affected containers with flooding quantities of water

- Apply water from as far a distance as possible

- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

- Keep material out of water sources and sewers

- Build dikes to contain flow as necessary

- Attempt to stop leak if without hazard

- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

ENGINE STARTING FLUID

4905728

FLAMMABLE GAS

UN1980

Engine starting fluid is a flammable liquid in a container mixed with a flammable or nonflammable compressed gas as a propellant. It is easily ignited and may only be shipped in cylinders. It is heavier than air and a flame can flash back to the source of leak very easily. Under fire conditions the cylinders may violently rupture and rocket. If the cylinders are aerosols they will violently rupture and rocket under fire conditions.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet

EPICHLOROHYDRIN

4907420

FLAMMABLE LIQUID, POISONOUS

UN2023

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Epichlorohydrin is a clear, colorless liquid with an irritating chloroform like odor. It is used to make plastics, and as a solvent. It has a flash point of 87 deg. F. If contaminated, the material is subject to polymerization with evolution of heat. If the polymerization takes place inside a container, the container is subject to rupture. It is irritating to the skin and respiratory system and is toxic by ingestion. It is heavier than water and soluble in water. Its vapors are heavier than air.

It weighs 9.8 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents

Apply "universal" gelling agent to immobilize spill

Apply fluorocarbon-water foam to diminish vapor and fire hazard

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Remove trapped material with suction hoses
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Combustion products include corrosive or toxic vapors
- Thermal decomposition to phosgene can occur

ERADICATOR, PAINT OR GREASE, LIQUID

4910178

FLAMMABLE LIQUID

UN1850

Eradicator, paint or grease, liquid is variable colored liquid generally having a petroleum odor. It has a flash point of less than 100 deg. F. It is generally lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ETCHING ACID, LIQUID, N.O.S. 4930005
CORROSIVE MATERIALS, ACIDIC, POISONOUS NA1790
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Etching acid, liquid, n.o.s. is a colorless to pale yellow liquid composed of nitric acid, hydrofluoric acid, water and possibly acetic acid. It is soluble in water with release of heat. It is corrosive to metals and tissue.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Vapor knockdown water is corrosive or toxic and should be diked for containment

ETHANE 4905731
FLAMMABLE GAS UN1035

Ethane is a colorless odorless gas. It is easily ignited and may only be shipped in cylinders. It is heavier than air but a flame can easily flash back to the source of the leak very easily. It can asphyxiate by the displacement of air. Under fire conditions the cylinders may violently rupture and rocket.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

Approach fire with caution

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet

ETHER (DIETHYL ETHER, ANESTHESIA GRADE) 4908157
FLAMMABLE LIQUID UN1155

Ethyl ether is a clear colorless liquid with a characteristic anesthetic odor. It is used as an anesthetic, as a solvent, and to make other chemicals. It has a flash point of -49 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may spread fire

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet

If material leaking (not on fire), downwind evacuation must be considered

ETHER (DIETHYL ETHER, OTHER THAN ANESTHESIA GRADE) 4908156
FLAMMABLE LIQUID UN1155

Ether is a clear colorless liquid with a characteristic anesthetic odor. It has a flash point of -49 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may spread fire

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet

If material leaking (not on fire), downwind evacuation must be considered

ETHION (AGRICULTURAL INSECTICIDES, NEC, LIQUID) 4921565
POISON B NA2783
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)
Ethion is a colorless liquid. It is used as a pesticide. It is a water emulsifiable liquid. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

- Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

ETHION (AGRICULTURAL INSECTICIDES, NEC, OTHER THAN LIQUID) 4921566
POISON B NA2783
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)
Ethion is a colorless liquid absorbed on a dry carrier. It is used as a pesticide. It is a wettable powder. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

- If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

ETHION (INSECTICIDES, OTHER THAN AGRICULTURAL, NEC) 4921567
POISON B NA2783
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)
Ethion is a colorless liquid or the liquid absorbed on a dry carrier. It is used as a pesticide. It is a wettable powder or water emulsifiable liquid. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

- Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

**ETHION MIXTURE, DRY (AGRICULTURAL
INSECTICIDES, NEC, OTHER THAN DRY LIQUID)
POISON B ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)**

4921568

NA2783

Ethion mixture, dry is a colorless liquid absorbed on a dry carrier. It is used as a pesticide. It is a wettable powder. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire

fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**ETHYL ACRYLATE, INHIBITED
FLAMMABLE LIQUID
POLYMERIZABLE**

4907215

UN1917

Ethyl acrylate is a clear colorless liquid with an acrid odor. It is used to make paints and plastics. It has a flash point of 60 deg. F. If the material is subjected to heat for prolonged periods or becomes contaminated it is subject to polymerization with evolution of heat. If the polymerization takes place inside a container the container may violently rupture. The material is lighter than water and slightly soluble in water. The vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may spread fire

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet

If material leaking (not on fire), downwind evacuation must be considered

**ETHYL ACETATE
FLAMMABLE LIQUID**

4909160

UN1173

Ethyl acetate is a clear colorless liquid with a fruity odor. It has a flash point of 24 deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

**ETHYL ALCOHOL (COLOGNE SPIRITS)
FLAMMABLE LIQUID**

4909159

NA1170

Ethyl alcohol is a clear colorless liquid with a characteristic odor. It has a flash point of 62 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

ETHYL ALCOHOL, ANHYDROUS, DENATURED IN PART WITH GASOLINE, GASOLINE CONTENT NOT TO EXCEED 5 PERCENT (ALCOHOL, N.O.S.)

4909110

FLAMMABLE LIQUID

UN1987

Ethyl alcohol, anhydrous, denatured in part with gasoline is a colorless liquid with a characteristic alcohol odor. It is used for blending with gasoline to make gasohol. It has a flash point of 58-60 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ETHYL ALDEHYDE (See ACETALDEHYDE 4907210)

**ETHYL BENZENE
FLAMMABLE LIQUID**

4909163

UN1175

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Ethyl benzene is a clear colorless liquid with an aromatic odor. It is used as a solvent and to make other chemicals. It has a flash point of 59 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

It weighs 7.2 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents

Apply "universal" gelling agent to immobilize spill
Apply fluorocarbon-water foam to diminish vapor and fire hazard
Environmental considerations—water spill

Use natural barriers or oil spill control booms to limit spill motion
Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material

Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Remove trapped material with suction hoses

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

**ETHYL BORATE
FLAMMABLE LIQUID**

4909161

UN1176

Ethyl borate is a clear colorless liquid. It has a flash point of 52 deg. F. It is lighter than water and is decomposed by water giving ethyl alcohol, another flammable liquid. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**ETHYL BUTYL ACETATE
COMBUSTIBLE LIQUID**

4913113

UN1177

Ethyl butyl acetate is a clear colorless liquid. It has a flash point of 130 deg. F. It is heavier than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ETHYL BUTYL ETHER
FLAMMABLE LIQUID

4909164
UN1179

Ethyl butyl ether is a clear, colorless liquid with an ethereal odor. It has a flash point of 40 deg. F. It is lighter than water and is slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ETHYL BUTYRALDEHYDE
FLAMMABLE LIQUID

4909168
UN1178

Ethyl butyraldehyde is a clear, colorless liquid. It has a flash point of 70 deg. F. It is lighter than water and is insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ETHYL BUTYRATE
FLAMMABLE LIQUID

4909132
UN1180

Ethyl butyrate is a clear colorless liquid with a pineapple-like odor. It has a flash point of 78 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ETHYL CHLOROACETATE
COMBUSTIBLE LIQUID

4913114
UN1181

Ethyl chloroacetate is a clear colorless liquid with a pungent odor. It has a flash point of 100 deg. F. It is heavier than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

ETHYL CHLOROFORMATE
FLAMMABLE LIQUID, CORROSIVE

4907617
UN1182

Ethyl chloroformate is a colorless liquid with a pungent odor. It has a flash point of 66 deg. F. Its vapor is irritating to the eyes and mucous membranes. It is corrosive to metals and tissue. It is decomposed by water to give hydrochloric acid, a corrosive material, with evolution of heat. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use "alcohol" foam, carbon dioxide or dry chemical
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

ETHYL CHLOROTHIOFORMATE CORROSIVE MATERIAL

4933327
UN2826

Ethyl chlorothioformate is an amber colored liquid with a pungent penetrating odor. It is combustible and has a flash point of 125 deg. F. The vapors are irritating to the eyes and respiratory system. It is corrosive to metals and tissue. It is heavier than water and reacts with water forming hydrochloric acid, another corrosive material, with evolution of heat. Its vapors are heavier than air.

If material on fire or involved in fire

- Use "alcohol" foam, carbon dioxide or dry chemical
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ETHYL CROTONATE FLAMMABLE LIQUID

4909162
UN1862

Ethyl crotonate is a clear colorless liquid with a pungent odor. It has a flash point of 36 deg. F. It is lighter than water and is insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ETHYL DICHLOROSILANE FLAMMABLE LIQUID, CORROSIVE, ACIDIC

4907615
UN1183

Ethyl dichlorosilane is a colorless fuming liquid with a pungent odor. It has a flash point of 30 deg. F. Vapor and liquid can cause burns. It is heavier than water and is decomposed by water to form hydrochloric acid, a corrosive material. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use "alcohol" foam, carbon dioxide or dry chemical
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

ETHYL FORMATE FLAMMABLE LIQUID

4908167
UN1190

Ethyl formate is a clear colorless liquid with a pleasant odor. It has a flash point of -4 deg. F. It is lighter than water and soluble in water. It is slowly decomposed by water to formic acid, a corrosive material and ethyl alcohol, another flammable liquid. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use "alcohol" foam, carbon dioxide or dry chemical
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Do not use water on material itself

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors
- Do not use water on material itself

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

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Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet

If material leaking (not on fire), downwind evacuation must be considered

ETHYL HEXALDEHYDE COMBUSTIBLE LIQUID

4913164
UN1191

Ethyl hexaldehyde is a clear colorless liquid with a mild odor. It has a flash point of 125 deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may spread fire

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

ETHYL LACTATE COMBUSTIBLE LIQUID

4913165
UN1192

Ethyl lactate is a clear colorless liquid with a mild odor. It has a flash point of 115 deg. F. It is heavier than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

ETHYL MERCAPTAN FLAMMABLE LIQUID

4908169
UN2363

Ethyl mercaptan is a clear colorless liquid with an overpowering garlic like odor. It has a flash point of -55 deg. F. and a boiling point of 97 deg. F. It is lighter than water and very slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may spread fire

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet

If material leaking (not on fire), downwind evacuation must be considered

ETHYL METHYL ETHER FLAMMABLE LIQUID

4908171
UN1039

Ethyl methyl ether is a clear colorless liquid with a medicinal like odor. It has a flash point of -35 deg. F. and a boiling point of 52 deg. F. Upon prolonged standing, or exposure to sunlight or oxygen, peroxides may form which may explode spontaneously or when heated. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may spread fire

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet

If material leaking (not on fire), downwind evacuation must be considered

ETHYL NITRATE
FLAMMABLE LIQUID
THERMALLY UNSTABLE

4907010
NA1993

Ethyl nitrate is a clear, colorless liquid with a pleasant odor. It has flash point of 50 deg. F. Prolonged exposure of the material to heat may result in the spontaneous decomposition of the material and this decomposition may reach explosive violence. Prolonged exposure of the containers of the material to fire or heat may result in the violent rupturing of the containers due to the decomposition of the material. It is heavier than water and insoluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
- If material leaking (not on fire), downwind evacuation must be considered

ETHYL NITRITE
FLAMMABLE LIQUID
THERMALLY UNSTABLE

4907020
UN1194

Ethyl nitrite is a clear colorless to yellow liquid. It has a flash point of 31 deg. f, and a boiling point of 63. deg. F. It is flammable over a wide range of vapor-air concentrations. The vapors may ignite spontaneously at 194 deg. f, and its decomposition may reach explosive violence. It is decomposed by heat and light. Prolonged exposure to heat or fire by the containers of the material may result in their violently rupturing due to the decomposition of the material. It is lighter than water and insoluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material

- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
- If material leaking (not on fire), downwind evacuation must be considered

ETHYL PHENYL DICHLOROSILANE
CORROSIVE MATERIAL, ACIDIC

4934245
UN2435

Ethyl phenyl dichlorosilane is a colorless liquid with a pungent odor. It is decomposed by water to hydrochloric acid with evolution of heat. It is corrosive to metals and tissue.

If material on fire or involved in fire

- Use dry chemical, carbon dioxide, or dry sand
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

ETHYL PHOSPHONOTHIOIC DICHLORIDE,
ANHYDROUS
CORROSIVE MATERIAL

4933355
NA1760

Ethyl phosphonothioic dichloride, anhydrous is a clear colorless liquid with a pungent odor. It will burn though it may require some effort to ignite. It is heavier than water and reacts with water forming hydrochloric acid, a corrosive material, with release of heat. It is corrosive to metals and tissue.

If material on fire or involved in fire

- Use "alcohol" foam, carbon dioxide or dry chemical
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

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Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear full protective clothing
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

ETHYL PHOSPHONOUS DICHLORIDE, ANHYDROUS 4933332
CORROSIVE MATERIAL, ACIDIC NA2845
PYROFORIC

Ethyl phosphonous dichloride, anhydrous is a colorless liquid with a pungent odor. It is pyroforic and will spontaneously ignite on contact with moist air or water. It is heavier than water and besides igniting on contact with water hydrochloric acid, a corrosive material, is produced. It is corrosive to metals and tissue.

If material on fire or involved in fire

Use "alcohol" foam, carbon dioxide or dry chemical
 Do not use water on material itself
 If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
 Use water spray to absorb vapors
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to knock-down vapors
 Do not use water on material itself
 Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear full protective clothing
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

ETHYL PHOSPHORODICHLORIDATE 4933333
CORROSIVE MATERIAL, ACIDIC NA1760

Ethyl phosphorodichloridate is a clear colorless liquid with a pungent odor. It reacts with water giving hydrochloric and phosphoric acids, which are also corrosive materials. It is corrosive to metals and tissue.

If material on fire or involved in fire

Use "alcohol" foam, carbon dioxide or dry chemical
 Do not use water on material itself
 If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
 Use water spray to absorb vapors
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to knock-down vapors
 Do not use water on material itself
 Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
 Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

ETHYL PROPIONATE
FLAMMABLE LIQUID

4909170
 UN1195

Ethyl propionate is a clear colorless liquid with a pineapple like odor. It has a flash point of 54 deg. F. It is lighter than water and is insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may spread fire
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

ETHYL SILICATE
COMBUSTIBLE LIQUID

4913166
 UN1292

Ethyl silicate is a clear colorless liquid with a faint odor. It has a flash point of 125 deg. F. It is lighter than water and reacts with water forming a silicone adhesive, a milky white mass. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

ETHYL-N-BUTYLAMINE (FLAMMABLE LIQUID, N.O.S.) 4909173
FLAMMABLE LIQUID UN1993

Ethyl-n-butylamine is a clear colorless liquid with a fish like odor. It has a flash point of 65 deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

ETHYL-N-CYCLOHEXYLAMINE (FLAMMABLE LIQUID, N.O.S.) 4909165

FLAMMABLE LIQUID

UN1993

Ethyl-n-cyclohexylamine is a clear colorless liquid with an ammonia like odor. It has a flash point of 86 deg. F. It is lighter than water and is slightly soluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

ETHYL-3,3-DI-(TERT-BUTYLPEROXY)BUTYRATE, (TECHNICALLY PURE)

4919275

ORGANIC PEROXIDE

UN2184

Ethyl-3,3-di-(tert-butylperoxy)butyrate, (technically pure) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

ETHYL-3,3-DI-(TERT-BUTYLPEROXY)BUTYRATE, (NOT MORE THAN 50% WITH INERT INORGANIC SOLID)

4919273

ORGANIC PEROXIDE

UN2598

Ethyl-3,3-di-(tert-butylperoxy)butyrate, (not more than 50% with inert inorganic solid) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

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Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

ETHYL-3,3-DI-(TERT-BUTYLPEROXY)BUTYRATE, 4919274 (NOT MORE THAN 77% IN SOLUTION)

ORGANIC PEROXIDE UN2185

Ethyl-3,3-di-(tert-butylperoxy)butyrate, (not more than 77% in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

ETHYLCHLORIDE 4908162 FLAMMABLE LIQUID UN1037

Ethyl chloride is a clear colorless liquid with a pungent odor. It has a flash point of -58 deg. F. and a boiling point of 54 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

ETHYLENE 4905734 FLAMMABLE GAS UN1962

Ethylene is a colorless gas with a sweet odor and taste. It is easily ignited. The gas is lighter than air but a flame can flash back to the source of the leak very easily. Under fire conditions cylinder of the gas may violently rupture and rocket.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

ETHYLENE CHLOROHYDRIN 4921420 POISON B, COMBUSTIBLE UN1135

Ethylene chlorohydrin is a colorless liquid with an ether-like odor. It is soluble in water and is also a combustible liquid. Its vapors are heavier than air and it is toxic by inhalation and skin absorption.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear full protective clothing
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If material leaking (not on fire), downwind evacuation must be considered

ETHYLENE DIBROMIDE (OR) 1,2-DIBROMOETHANE 4940335
ORM-A UN1605

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Ethylene dibromide is a clear colorless liquid with a sweetish odor. It is used as a solvent, as a grain fumigant, in the manufacture of other chemicals, and for many other uses. It is heavier than water and slightly soluble in water. It is non-combustible. It can cause illness by inhalation, skin absorption and/or ingestion.

It weighs 18.1 pounds per gallon.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
 (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
 Build dikes to contain flow as necessary

Personnel protection

Keep upwind
 Wear boots, protective gloves, and goggles
 Avoid breathing vapors or dusts
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Apply "universal" gelling agent to immobilize spill

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Remove trapped material with suction hoses

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

ETHYLENE DICHLORIDE 4909166
FLAMMABLE LIQUID UN1184
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Ethylene dichloride is a clear colorless liquid with a chloroform-like odor. It has a flash point of 56 deg. F. It is heavier than water and insoluble in water. Its vapors are heavier than air.

It weighs 10.4 pounds per gallon.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may spread fire

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 Wear self-contained breathing apparatus when fighting fires involving this material

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents

Apply "universal" gelling agent to immobilize spill

Apply fluorocarbon-water foam to diminish vapor and fire hazard

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Remove trapped material with suction hoses

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors
 Thermal decomposition to phosgene can occur

ETHYLENE GLYCOL DIETHYL ETHER 4913115
COMBUSTIBLE LIQUID UN1153

Ethylene glycol diethyl ether is a clear colorless liquid with a faint ether-like odor. It has a flash point of 100 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

ETHYLENE GLYCOL MONOETHYL ETHER 4913116
COMBUSTIBLE LIQUID UN1171

Ethylene glycol monoethyl ether is a clear colorless liquid. It has a flash point of 120 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

Continued on next page

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**ETHYLENE GLYCOL MONOETHYL ETHER ACETATE 4913117
COMBUSTIBLE LIQUID UN1172**

Ethylene glycol monoethyl ether acetate is a clear colorless liquid with a pleasant odor. It has a flash point of 120 deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**ETHYLENE GLYCOL MONOMETHYL ETHER 4913162
COMBUSTIBLE LIQUID UN1185**

Ethylene glycol monomethyl ether is a clear colorless liquid with a pleasant odor. It has a flash point of 110 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**ETHYLENE GLYCOL MONOMETHYL ETHER ACETATE 4913163
COMBUSTIBLE LIQUID UN1189**

Ethylene glycol monomethyl ether acetate is a clear colorless liquid with a pleasant odor. It has a flash point of 135 deg. F. It is heavier than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**ETHYLENE IMINE, INHIBITED 4906220
FLAMMABLE LIQUID, POISONOUS UN1185
THERMALLY UNSTABLE**

Ethylene imine is a clear, colorless liquid with an ammonia-like odor. It has a flash point of 12 deg. F. It is flammable over a wide range of vapor-air concentrations. The vapors are initially irritating to the skin, eyes, nose, and throat. Prolonged exposure may result in death due to inhalation, skin absorption, or ingestion. It is lighter than water and soluble in water. The vapors are heavier than air. Prolonged exposure of containers of the material to fire or heat may result in its polymerization and a violent rupturing of the container. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Adjust pH to neutral (pH-7)
- Neutralize with agricultural lime (staked lime), crushed limestone, or sodium bicarbonate
- Adjust pH to neutral (pH-7)
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CUPRIC TARTRATE

4962614

ORM-E

NA9111

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Cupric tartrate is a green to blue powder. It is used for electroplating metals. It is insoluble in water. It is non-combustible.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

CUPRIETHYLENE-DIAMINE SOLUTION

4935630

CORROSIVE MATERIAL, BASIC

UN1761

Cupriethylene-diamine solution is a purple colored liquid with an ammonia like odor. It is soluble in water. It is corrosive to metals and tissue. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

CUTCH, CATECHU, OR JAPONICA EXTRACTS, LIQUID (COMBUSTIBLE LIQUID, N.O.S.)

4915432

COMBUSTIBLE LIQUID

NA1993

Cutch, catechu, or japonica extracts, liquid are materials containing a solvent having a closed cup flash point between 100 and 199 deg. F. The hazard of these materials is combustibility.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

CUTCH, CATECHU, OR JAPONICA EXTRACTS, LIQUID (FLAMMABLE LIQUID, N.O.S.)

4910432

FLAMMABLE LIQUID

UN1993

Cutch, catechu, or japonica extracts, liquid are materials containing a solvent having a closed cup flash point of less than 100 deg. F. The hazard of these materials is flammability.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash or cement powder
- Neutralize with sodium bisulfate (nahso4)

Environmental considerations—water spill

- Use natural barriers or oil spill control booms to limit spill motion
- Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material
- Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms
- Add sodium bisulfate
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Vapor knockdown water is corrosive or toxic and should be diked for containment

**ETHYLENEDIAMINETETRAACETIC ACID (OR) EDTA 4965910
ORM-E NA9117**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Ethylenediaminetetraacetic acid is colorless crystalline solid. It is used in chemical analysis, to make detergents and cleaning compounds, and for many other uses. It is slightly soluble in water. It is non-combustible.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Add caustic soda
- Adjust ph to neutral (ph-7)
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

ETHYLHEXYLACRYLATE (COMBUSTIBLE LIQUID, N.O.S.)

4912220

COMBUSTIBLE LIQUID

NA1993

Ethylhexylacrylate is a clear colorless liquid with a pleasant odor. It is used in making of paints and plastics. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet

ETHYLTRICHLOROSILANE

4907620

FLAMMABLE LIQUID, CORROSIVE ACIDIC

UN1196

Ethyltrichlorosilane is a colorless fuming liquid with a pungent odor. It has a flash point of 57 deg. F. Vapor and liquid can cause burns. It is heavier than water and is decomposed by water to form hydrochloric acid, a corrosive material. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use "alcohol" foam, carbon dioxide or dry chemical
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

**ETIOLOGIC AGENT, N.O.S. (OR) INFECTIOUS
SUBSTANCE, HUMAN, N.O.S.** 4925999
ETIOLOGIC AGENT NA2814
Etologic agent or infectious substance, human is a viable microorganism or its toxin which causes or may cause human disease. In case of damage to, or leaking of the package contact-
Director, center for disease control
Atlanta, georgia its toxin which causes or may cause human disease.
In case of damage to, or leaking of the package contact- corrosive material. Its vapors are heavier than air.

EXPLOSIVE AUTO ALARM 4903420
CLASS C EXPLOSIVE
Explosive auto alarm is a tubular device containing a small amount of explosive composition and igniting compound which is ignited by an electric spark.
If material on fire or involved in fire
Dangerously explosive
Flood with water
Apply water from as far a distance as possible
If material not on fire and not involved in fire
Keep sparks, flames, and other sources of ignition away
Personnel protection
Approach fire with caution
Avoid breathing dusts, and fumes from burning material
Wear self-contained breathing apparatus when fighting fires involving this material
Evacuation
If fire becomes uncontrollable—evacuate for a radius of 1500 feet

EXPLOSIVE BOMB 4901230
CLASS A EXPLOSIVE
Explosive bomb is a metal or other type of container filled with a high explosive. It may be shipped either fuzed or unfuzed. The fuzed bomb may be sensitive to shock or mechanical impact. Under prolonged exposure to heat or fire it can explode.
If material on fire or involved in fire
Dangerously explosive
Do not fight fires in a cargo of explosives
Evacuate area and let burn
If material not on fire and not involved in fire
Keep sparks, flames, and other sources of ignition away
Personnel protection
Avoid breathing dusts, and fumes from burning material
Wear self-contained breathing apparatus when fighting fires involving this material
Evacuation
If the material is on fire or involved in fire evacuate for a radius of 5000 feet

EXPLOSIVE CABLE CUTTER 4903310
CLASS C EXPLOSIVE
Explosive cable cutter is a device containing an explosive charge used to propel a knife-edged component into an anvil.
If material on fire or involved in fire
Flood with water
Apply water from as far a distance as possible
If material not on fire and not involved in fire
Keep sparks, flames, and other sources of ignition away

Personnel protection
Approach fire with caution
Avoid breathing dusts, and fumes from burning material
Wear self-contained breathing apparatus when fighting fires involving this material
Evacuation
If fire becomes uncontrollable—evacuate for a radius of 1500 feet

EXPLOSIVE MINE 4901235
CLASS A EXPLOSIVE
Explosive mine is a metal or composition container filled with a high explosive. It may be shipped either fuzed or unfuzed. The fuzed mine may be sensitive to shock or mechanical impact. Under prolonged exposure to heat or fire it can explode.
If material on fire or involved in fire
Dangerously explosive
Do not fight fires in a cargo of explosives
Evacuate area and let burn
If material not on fire and not involved in fire
Keep sparks, flames, and other sources of ignition away
Personnel protection
Avoid breathing dusts, and fumes from burning material
Wear self-contained breathing apparatus when fighting fires involving this material
Evacuation
If the material is on fire or involved in fire evacuate for a radius of 5000 feet

EXPLOSIVE POWER DEVICE, CLASS B 4902570
CLASS B EXPLOSIVE
Explosive power device, class b is a device designed to drive a generator or mechanical apparatus by means of a propellant explosive, class b. The device has a housing containing the propellant explosive and an electric igniter or squib. The explosive power device class b differs from an explosive power device, class c by the amount of the propellant explosive.
If material on fire or involved in fire
Dangerously explosive
Do not fight fires in a cargo of explosives
Evacuate area and let burn
If material not on fire and not involved in fire
Keep sparks, flames, and other sources of ignition away
Personnel protection
Avoid breathing dusts, and fumes from burning material
Wear self-contained breathing apparatus when fighting fires involving this material
Evacuation
If the material is on fire or involved in fire evacuate for a radius of 2500 feet

EXPLOSIVE POWER DEVICE, CLASS C 4903480
CLASS C EXPLOSIVES
Explosive power device, class c is a device designed to drive a generator or mechanical apparatus by means of a propellant explosive class b. The device has a housing containing the propellant explosive and an electric igniter or squib. The explosive power device, class c differs from an explosive power device, class b by the amount of propellant explosive or the power of the propellant explosive.
If material on fire or involved in fire
Flood with water
Apply water from as far a distance as possible

Continued on next page

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Approach fire with caution

Avoid breathing dusts, and fumes from burning material

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 1500 feet

EXPLOSIVE PROJECTILE

4901240

CLASS A EXPLOSIVE

Explosive projectile is a shell, projectile, warhead, or rocket head loaded with explosives or bursting charges with or without other materials. It may be shipped either fuzed or unfuzed. The fuzed projectile may be sensitive to shock or mechanical impact. Under prolonged exposure to heat or fire it can explode.

If material on fire or involved in fire

Dangerously explosive

Do not fight fires in a cargo of explosives

Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Avoid breathing dusts, and fumes from burning material

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

EXPLOSIVE RELEASE DEVICE

4903315

CLASS C EXPLOSIVE

Explosive release device consists of a rod or link fitted with a means for mechanical attachment to other apparatus or equipment and containing a small electrically initiated explosive charge which will break the rod or link upon functioning.

If material on fire or involved in fire

Flood with water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Approach fire with caution

Avoid breathing dusts, and fumes from burning material

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 1500 feet

EXPLOSIVE RIVET

4903425

CLASS C EXPLOSIVE

Explosive rivet is an ordinary rivet having a cavity in the end opposite to the rivet head. The cavity is filled with an explosive composition. It functions on application of heat or impact by expanding.

If material on fire or involved in fire

Dangerously explosive

Flood with water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Approach fire with caution

Avoid breathing dusts, and fumes from burning material

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 1500 feet

EXPLOSIVE TORPEDO

4901245

CLASS A EXPLOSIVE

Explosive torpedo is a metal device containing a propulsion device and a quantity of high explosives. It may be shipped either fuzed or unfuzed. It may be sensitive to shock or mechanical impact. Under prolonged exposure to heat or fire it can explode.

If material on fire or involved in fire

Dangerously explosive

Do not fight fires in a cargo of explosives

Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Avoid breathing dusts, and fumes from burning material

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

EXTRACT, LIQUID, FLAVORING

4910181

FLAMMABLE LIQUID

UN1197

Extract, liquid, flavoring is generally an alcoholic extract of various vegetable products used for flavoring food. It has a flash point of less than 100 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

**EXTRACTS, CHESTNUT OR QUEBRACHO, LIQUID
(COMBUSTIBLE LIQUID, N.O.S.)**

4915430

COMBUSTIBLE LIQUID

NA1993

Extracts, chestnut or quebracho, liquid are materials containing a solvent having a closed cup flash point between 100 and 199 deg. F. The hazard is combustibility.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

EXTRACTS, CHESTNUT OR QUEBRACHO, LIQUID (FLAMMABLE LIQUIDS, N.O.S.) 4910430**FLAMMABLE LIQUID UN1993**

Extracts, chestnut or quebracho, liquid are materials containing a solvent having a closed cup flash point of less than 100 deg. F. The hazard is flammability.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

EXTRACTS, FUSTIC OR LOGWOOD, LIQUID OR PASTE (COMBUSTIBLE LIQUID, N.O.S.) 4915434**COMBUSTIBLE LIQUID NA1993**

Extracts, fustic or logwood liquid or paste are materials containing a solvent having a closed cup flash point between 100 and 199 deg. F. The hazard of these materials is combustibility.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

EXTRACTS, FUSTIC OR LOGWOOD, LIQUID OR PASTE (FLAMMABLE LIQUID, N.O.S.) 4910434**FLAMMABLE LIQUID UN1993**

Extracts, fustic or log wood liquid or paste are materials containing a solvent having a closed cup flash point of less than 100 deg. F. The hazard of these materials is flammability.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

EXTRACTS, HYPERNIC LIQUID OR PASTE (COMBUSTIBLE LIQUID, N.O.S.) 4915438**COMBUSTIBLE LIQUID NA1993**

Extracts, hypernic, liquid or paste are materials containing a solvent having a closed cup flash point between 100 and 199 deg. F. The hazard of these materials is combustibility.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

EXTRACTS, HYPERNIC LIQUID OR PASTE (FLAMMABLE LIQUID, N.O.S.) 4910438

FLAMMABLE LIQUID UN1993

Extracts, hypernic, liquid or paste are materials containing a solvent having a closed cup flash point of less than 100 deg. F. The hazard of these materials is flammability.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep material out of water sources and sewers
- Keep sparks, flames, and other sources of ignition away
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

EXTRACTS, TANNING, NEC LIQUID OR PASTE (COMBUSTIBLE LIQUID, N.O.S.) 4915440

COMBUSTIBLE LIQUID NA1993

Extracts, tanning, nec liquid or paste are materials containing a solvent having a closed cup flash point between 100 and 199 deg. F. The hazard of these materials is combustibility.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

EXTRACTS, TANNING, NEC LIQUID OR PASTE (FLAMMABLE LIQUID, N.O.S.) 4910440

FLAMMABLE LIQUID UN1993

Extracts, tanning, nec liquid or paste are materials containing a solvent having a closed cup flash point of less than 100 deg. F. The hazard of these materials is flammability.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

FATTY ALCOHOLS, ALIPHATIC OR CYCLIC, 4935223

CYANOETHYLATED AND HYDROGENATED, AND DERIVATIVES THEREOF SUCH AS SALTS DIAMINES, OXYALKYLATES AND

QUANTERNARY AMMONIUM COMPOUNDS (ALKALINE CORROSIVE LIQUID, N.O.S.)

CORROSIVE MATERIAL, BASIC NA1719

Fatty alcohols, aliphatic or cyclic, cyanoethylated or hydrogenated and derivatives thereof such as salts, diamines, oxyalkylates and quaternary ammonium compounds are colorless to milky or amber colored liquid. They will burn though they may require some effort to ignite. They are lighter than water and may or may not be soluble in water. They are corrosive to metals and/or tissue.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

FATTY ALCOHOLS, ANIMAL FAT OR ANIMAL, FISH, 4915546

PETROLEUM, SEA-ANIMAL OR VEGETABLE OILS, NEC, WHEN BLENDED WITH EACH OTHER, LIQUID (ALCOHOL, N.O.S.)

COMBUSTIBLE LIQUID UN1987

Fatty alcohols are clear colorless to light colored liquids. They have a flash point between 100 and 200 deg. F. They are lighter than water and insoluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

FEEDING TANKAGE, NEC (FLAMMABLE SOLID, N.O.S.) 4917412

FLAMMABLE SOLID NA1325

Feeding tankage, nec is various scrap food products. If it has not been properly cooled or is too dry it is liable to spontaneous heating and ignition.

If material on fire or involved in fire

Flood with water

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

FELT, WASTE, WET (See WASTE WOOL, WET 4917372)

FERRIC AMMONIUM CITRATE 4963349

ORM-E NA9118

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Ferric ammonium citrate is a yellowish brown to red solid with a faint odor of ammonia. It is used in medicine, in making blueprints, and as a feed additive. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Keep upwind

Wear boots, protective gloves, and goggles

Avoid breathing vapors or dusts

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Adjust pH to neutral (pH-7)

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

FERRIC AMMONIUM OXALATE 4963352

ORM-E NA9119

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Ferric ammonium oxalate is a green crystalline solid. It is used in making blueprints. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Keep upwind

Wear boots, protective gloves, and goggles

Avoid breathing vapors or dusts

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Adjust pH to neutral (pH-7)

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

FERRIC ARSENATE, SOLID 4923231

POISON B UN1606

Ferric arsenate, solid is a green or brown powder. It is insoluble in water. It is toxic by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

FERRIC ARSENITE, SOLID 4923232

POISON B UN1607

Ferric arsenite is a yellow-brown powder. It is insoluble in water. It is toxic by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

FERRIC CHLORIDE SOLID

4944138

ORM-B

UN1773

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Ferric chloride is an orange to brown black solid. It is used to treat sewage, industrial waste, to purify water, as an etching agent for engraving circuit boards, and in the manufacture of other chemicals. It is soluble in water. It is non-combustible. It is corrosive to aluminum.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Keep upwind

Wear boots, protective gloves, and goggles

Avoid breathing vapors or dusts

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Adjust pH to neutral (pH-7)

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Adjust pH to neutral (pH-7)

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

FERRIC CHLORIDE SOLUTION (IRON CHLORIDE, CRUDE, LIQUID NOT LESS THAN 50% WATER)

4932342

CORROSIVE MATERIAL

UN2582

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Ferric chloride solution is the water solution of the yellow orange crystalline solid having a faint hydrochloric acid odor. It is corrosive to metals and tissue.

It weighs 12.6 pounds per gallon.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing fumes from burning material

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Adjust pH to neutral (pH-7)

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

FERRIC CHLORIDE SOLUTION (IRON CHLORIDE

4932343

(IRON MURIATE), OTHER THAN CRUDE, LIQUID)**CORROSIVE MATERIAL**

UN2582

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Ferric chloride solution is the water solution of the yellow orange crystalline solid having a faint hydrochloric acid odor. It is corrosive to metals and tissue.

It weighs 12.6 pounds per gallon.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing fumes from burning material

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

FERRIC FLUORIDE

4962626

ORM-E

NA9120

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Ferric fluoride is a green crystalline solid. It is used in ceramics. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Keep upwind

Wear boots, protective gloves, and goggles

Avoid breathing vapors or dusts

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire
fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone,
or sodium bicarbonate

Add soda ash

Adjust ph to neutral (ph-7)

Use mechanical dredges or lifts to remove immobilized masses of
pollutants and precipitates

**FERRIC NITRATE
OXIDIZER**

4918725
UN1466

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Ferric nitrate is a violet crystalline solid. It is used for dyeing and
tanning, in chemical analysis, and in medicine. It is soluble in water. It
is non-combustible but it will accelerate the burning of combustible ma-
terials. If large quantities are involved in the fire or the combustible
material is finely divided an explosion may result. Prolonged exposure
of the material to fire or heat may result in an explosion. Toxic oxides
of nitrogen are produced in fires involving this material.

If material on fire or involved in fire

Flood with water

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with
copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involv-
ing this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 2500 feet

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Cover solids with a plastic sheet to prevent dissolving in rain or fire
fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone,
or sodium bicarbonate

Adjust ph to neutral (ph-7)

Use mechanical dredges or lifts to remove immobilized masses of
pollutants and precipitates

FERRIC SULPHATE SOLUTION (FERRIC SULFATE)

4963827

ORM-E

NA9121

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Ferric sulphate solution is the yellow crystalline solid dissolved in
water. It is used in water purification, as a disinfectant, in textile proc-
essing, and for many other uses. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Keep upwind

Wear boots, protective gloves, and goggles

Avoid breathing vapors or dusts

Wash away any material which may have contacted the body with
copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or
foamed concrete

Absorb bulk liquid with fly ash, cement powder, sawdust, or com-
mercial sorbents

Neutralize with agricultural lime (slaked lime), crushed limestone,
or sodium bicarbonate

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone,
or sodium bicarbonate

Adjust ph to neutral (ph-7)

Use mechanical dredges or lifts to remove immobilized masses of
pollutants and precipitates

FERROUS AMMONIUM SULFATE

4963354

ORM-E

NA9122

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Ferrous ammonium sulfate is a light green crystalline solid. It is used
in medicine, in chemical analysis, and in metallurgy. It is soluble in water.
It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Keep upwind

Wear boots, protective gloves, and goggles

Avoid breathing vapors or dusts

Wash away any material which may have contacted the body with
copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire
fighting water

Environmental considerations—water spill

Allow to aerate

Neutralize with agricultural lime (slaked lime), crushed limestone,
or sodium bicarbonate

Adjust ph to neutral (ph-7)

Use mechanical dredges or lifts to remove immobilized masses of
pollutants and precipitates

**FERROUS AMMONIUM SULPHATE, FERTILIZER
GRADE (IRON AMMONIUM SULPHATE)
(FERROUS AMONIUM SULFATE)**

4963357

ORM-E

NA9122

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Ferrous ammonium sulphate, fertilizer grade is a light green crystalline
solid. It is used as an ingredient to mixed fertilizers or as a soil additive
by itself. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Keep upwind

Wear boots, protective gloves, and goggles

Avoid breathing vapors or dusts

Wash away any material which may have contacted the body with
copious amounts of water or soap and water

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Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire
fighting water

Environmental considerations—water spill

Allow to aerate
Neutralize with agricultural lime (slaked lime), crushed limestone,
or sodium bicarbonate
Adjust pH to neutral (pH-7)
Use mechanical dredges or lifts to remove immobilized masses of
pollutants and precipitates

**FERROUS ARSENATE, SOLID
POISON B****4923233
UN1608**

Ferrous arsenate, solid is a green powder. It is insoluble in water. It
is toxic by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with
copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involv-
ing this material
If contact with the material anticipated, wear full protective clothing

**FERROUS CHLORIDE, SOLID
ORM-A****4941131
NA1759****ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)**

Ferrous chloride is a greenish white crystalline solid. It is used in
sewage treatment, in dyeing of fabrics, and for many other uses. It is
soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with
copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire
fighting water

Environmental considerations—water spill

Adjust pH to neutral (pH-7)
Allow to aerate
Neutralize with agricultural lime (slaked lime), crushed limestone,
or sodium bicarbonate
Adjust pH to neutral (pH-7)
Use mechanical dredges or lifts to remove immobilized masses of
pollutants and precipitates

**FERROUS CHLORIDE, SOLUTION
CORROSIVE MATERIAL****4932329
NA1760****ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)**

Ferrous chloride, solution is the greenish-white crystalline solid dis-
solved in water. It is used in dyeing, in medicine, and sewage treatment.
It is corrosive to metals and tissue.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with
copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or
foamed concrete

Absorb bulk liquid with fly ash, cement powder, sawdust, or com-
mercial sorbents

Neutralize with agricultural lime (slaked lime), crushed limestone,
or sodium bicarbonate

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone,
or sodium bicarbonate

Use mechanical dredges or lifts to remove immobilized masses of
pollutants and precipitates

Adjust pH to neutral (pH-7)

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

**FERROUS SULFATE
ORM-E****4963832
NA9125****ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)**

Ferrous sulfate is a greenish to yellow brown crystalline solid. It is
used used to make other iron compounds, in water and sewage treat-
ment, as a fertilizer, feed additive, and for many other uses. It is slightly
soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with
copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire
fighting water

Environmental considerations—water spill

Adjust ph to neutral (ph-7)
Allow to aerate
Neutralize with agricultural lime (slaked lime), crushed limestone,
or sodium bicarbonate
Adjust ph to neutral (ph-7)
Use mechanical dredges or lifts to remove immobilized masses of
pollutants and precipitates

**FERROUS SULPHATE, LESS THAN 40% WATER 4963836
(FERROUS SULFATE)****ORM-E NA9125
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)**

Ferrous sulphate, less than 40% water is a greenish to yellowish
brown crystalline solid. It is used for sewage and water treatment, as
a fertilizer, feed additive, and for many other uses. It is slightly soluble
in water. It is non-combustible.

It weighs 15.0 pounds per gallon.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with
copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or
foamed concrete

Absorb bulk liquid with fly ash, cement powder, sawdust, or com-
mercial sorbents

Neutralize with agricultural lime (slaked lime), crushed limestone,
or sodium bicarbonate

Environmental considerations—water spill

Adjust ph to neutral (ph-7)
Allow to aerate
Neutralize with agricultural lime (slaked lime), crushed limestone,
or sodium bicarbonate
Adjust ph to neutral (ph-7)
Use mechanical dredges or lifts to remove immobilized masses of
pollutants and precipitates

**FERROUS SULPHATE, NOT LESS THAN 40% WATER 4963841
(FERROUS SULFATE)****ORM-E NA9125
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)**

Ferrous sulphate, not less than 40% water is either a greenish to
yellow brown crystalline or a dark green to brown liquid. It is used for
water or sewage treatment, as a fertilizer ingredient, and for other uses.
It is non-combustible.

It weighs 15.0 pounds per gallon.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with
copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or
foamed concrete

Absorb bulk liquid with fly ash, cement powder, sawdust, or com-
mercial sorbents

Neutralize with agricultural lime (slaked lime), crushed limestone,
or sodium bicarbonate

Environmental considerations—water spill

Adjust ph to neutral (ph-7)
Allow to aerate
Neutralize with agricultural lime (slaked lime), crushed limestone,
or sodium bicarbonate
Adjust ph to neutral (ph-7)
Use mechanical dredges or lifts to remove immobilized masses of
pollutants and precipitates

**FERTILIZER AMMONIATING SOLUTION (CONTAINING 4904250
FREE AMMONIA)****NONFLAMMABLE GAS, CORROSIVE UN1043**

Fertilizer ammoniating solution is the solution of ammonium com-
pounds charged with ammonia gas and having a absolute pressure
exceeding 40 psi at 70 deg. F. in the container. It has the characteristic
odor of ammonia. The solution may be corrosive. Although ammonia is
lighter than air, the vapors initially tend to hug the ground.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use water spray to absorb vapors

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear boots, protective gloves, and gas tight goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with
copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

Evacuation

If material leaking (not on fire), downwind evacuation must be
considered

**FERTILIZER SOLUTION, CONSISTING OF WATER, 4935272
FREE AMMONIA AND SULPHUR, TOTAL
AMMONIA CONTENT NOT TO EXCEED 30
PERCENT BY WEIGHT (CORROSIVE LIQUID,
N.O.S.)****CORROSIVE MATERIAL UN1760**

Fertilizer solution, consisting of water, free ammonia and sulphur, total
ammonia content not to exceed 30 percent by weight is a colorless to
yellow colored liquid having the odor characteristic of ammonia. It is
corrosive to metals and tissue. its vapors are heavier than air.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Apply water from as far a distance as possible

Use water spray to absorb vapors

Continued on next page

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

FILM (NITROCELLULOSE) (CELLULOSE FILM SCRAP OR WASTE) 4917383

FLAMMABLE SOLID

NA1324

Film (nitrocellulose) is a photographic film made from nitrocellulose. It is easily ignited and burns with great rapidity. Older film may deteriorate and be liable to spontaneous heating and ignition. Toxic oxides of nitrogen are produced during combustion.

If material on fire or involved in fire

- Flood with water
- Apply water from as far a distance as possible
- If material not on fire and not involved in fire**
- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Wear self-contained breathing apparatus when fighting fires involving this material
- Approach fire with caution

FERTILIZING COMPOUNDS, NEC DRY (OXIDIZING MATERIAL, N.O.S.) 4918920

OXIDIZER

UN1479

Fertilizing compounds, nec, dry are various materials which have the property of accelerating the burning of combustible material. These materials may not burn by themselves. Prolonged exposure to fire or heat by these materials and/or their containers may result in an explosion. These materials may only be packaged in containers of 55-gallon capacity or smaller.

If material on fire or involved in fire

- Flood with water
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 2500 feet

FIBERS OR FABRIC, CONTAINING NOT MORE THAN 5% ANIMAL OR VEGETABLE OIL 4917327

FLAMMABLE SOLID

NA1373

Fibers or fabric, containing not more than 5% animal or vegetable oil are materials that have been contaminated, impregnated or coated with animal or vegetable oil. It is liable to spontaneous heating and ignition.

If material on fire or involved in fire

- Flood with water

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

FIBERS, BURNT 4917325

FLAMMABLE SOLID

NA1372

Burnt fiber is fiber that has been on fire and the burned parts have not been removed. The hazard is that once the fiber has been on fire the fire may persist for a long time in the interior of the bale or bag.

If material on fire or involved in fire

- Flood with water

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

FILM (NITROCELLULOSE) (MOVING PICTURE FILM SCRAP) 4917340

FLAMMABLE SOLID

NA1324

Film (nitrocellulose) is a photographic film made of nitrocellulose. It is easily ignited and burns with great rapidity. Older film may deteriorate and be liable to spontaneous heating and ignition. Toxic oxides of nitrogen are produced during combustion.

If material on fire or involved in fire

- Flood with water
- Apply water from as far a distance as possible
- If material not on fire and not involved in fire**
- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Wear self-contained breathing apparatus when fighting fires involving this material
- Approach fire with caution

FILM (NITROCELLULOSE) (MOVING PICTURE FILM, EXPOSED, NEC) 4917337

FLAMMABLE SOLID

NA1324

Film (nitrocellulose) is a photographic film made of nitrocellulose. It is easily ignited and burns with great rapidity. Older film may deteriorate and be liable to spontaneous heating and ignition. Toxic oxides of nitrogen are produced during combustion.

If material on fire or involved in fire

- Flood with water
- Apply water from as far a distance as possible
- If material not on fire and not involved in fire**
- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Wear self-contained breathing apparatus when fighting fires involving this material
- Approach fire with caution

FILM (NITROCELLULOSE) (PHOTOGRAPHIC FILM, NEC, UNEXPOSED) 4917382

FLAMMABLE SOLID

NA1324

Film (nitrocellulose) is a photographic film made from nitrocellulose. It is easily ignited and burns with great rapidity. Older film may deteriorate and be liable to spontaneous heating and ignition. Toxic oxides of nitrogen are produced during combustion.

If material on fire or involved in fire

- Flood with water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Wear self-contained breathing apparatus when fighting fires involving this material

Approach fire with caution

**FIRE EXTINGUISHER 4904820
NONFLAMMABLE GAS UN1044**

Fire extinguisher is a device containing a nonflammable gas under pressure. It has a mechanism to spray the contained gas or expel a liquid, through some type of nozzle.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Personnel protection

Avoid breathing vapors

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

**FIRE EXTINGUISHER CHARGES CONTAINING 4930219
SULFURIC ACID
CORROSIVE MATERIAL, ACIDIC UN1774**

Fire extinguisher charges consist of two chemicals packed in the same outside container. One is sodium bicarbonate, white water soluble solid that is non hazardous. The other is sulfuric acid, in limited quantities, a colorless odorless liquid. Sulfuric acid is soluble in water with release of heat. It is corrosive to metals and tissue.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Build dikes to contain flow as necessary

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

**FIRE PROOFING COMPOUNDS, LIQUID, NEC 4936536
(CORROSIVE LIQUID, N.O.S.)**

CORROSIVE MATERIAL UN1760

Fireproofing compounds, liquid, nec are various colored materials. They are corrosive to metals and/or tissue.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

**FIRECRACKERS OR TORPEDOES (COMMON 4903525
FIREWORKS)
CLASS C EXPLOSIVE**

Firecrackers or torpedoes are tubular devices, made of paper with external dimensions not exceeding 1 1/2 inches in length and 1/4 inch in diameter. They are filled with a pyrotechnic composition not exceeding two grains in weight designed to produce an audible effect.

If material on fire or involved in fire

Flood with water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Approach fire with caution

Avoid breathing dusts, and fumes from burning material

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 1500 feet

**FISH MEAL CONTAINING LESS THEN 6% OR MORE 4917328
THAN 12% WATER (FISH MEAL, GROUND,
PULVERIZED OR SCREENED)**

FLAMMABLE SOLID NA1374

Fish meal that is too dry is liable to spontaneous heating and ignition. Fish meal that is too wet is liable to decay, spontaneous heating and ignition. It must be shipped in air tight metal containers.

If material on fire or involved in fire

Flood with water

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

**FISH OIL RESIDUUM, DEHYDRATED (GARBAGE 4917460
TANKAGE (CONTAINING LESS THAN 8%
MOISTURE)**

FLAMMABLE SOLID NA1325

Fish oil residuum, dehydrated is liable to spontaneous heating and ignition if not properly cooled after manufacture or is too dry.

If material on fire or involved in fire

Flood with water

**FISH SCRAP CONTAINING LESS THAN 6% OR MORE
THAN 12% WATER (FISH SCRAP, GROUND,
PULVERIZED OR SCREENED)**

4917329

FLAMMABLE SOLID

NA1374

Fish scrap that is too dry is liable to spontaneous heating and ignition. Fish scrap that is too wet is liable to decay, spontaneous heating and ignition. It must be shipped in airtight metal containers.

If material on fire or involved in fire

Flood with water

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

**FISH SCRAP CONTAINING LESS THAN 6% OR MORE
THAN 12% WATER (FISH SCRAP, NEC, DRY NOT
GROUND, PULVERIZED NOR SCREENED)**

4917330

FLAMMABLE SOLID

NA1374

Fish scrap that is too dry is liable to spontaneous heating and ignition. Fish scrap that is too wet is liable to decay, spontaneous heating and ignition. It must be shipped in airtight metal containers.

If material on fire or involved in fire

Flood with water

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

**FISH SCRAP OR FISH MEAL CONTAINING LESS
THAN 6% OR MORE THAN 12% WATER (FISH
TANKAGE, NEC, DRY, NOT GROUND,
PULVERIZED, OR SCREENED)**

4917331

FLAMMABLE SOLID

NA1374

Fish scrap or fish meal that is too dry is liable to spontaneous heating and ignition. Fish scrap or fish meal that is too wet is liable to decay, spontaneous heating and ignition. It must be shipped in airtight metal containers.

If material on fire or involved in fire

Flood with water

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

**FISH SCRAP, NEC, GREEN (FISH SCRAP
(CONTAINING LESS THAN 6% OR MORE THAN
12% MOISTURE))**

4917462

FLAMMABLE SOLID

NA1374

Fish scrap, nec, green that is too dry is liable to spontaneous heating and ignition; or too wet is liable to decay, spontaneous heating and ignition.

If material on fire or involved in fire

Flood with water

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

**FLAME COLORING COMPOUNDS (OXIDIZING
MATERIALS, N.O.S.)**

4918905

OXIDIZER

UN1479

Flame coloring compounds are various materials which have the property of accelerating the burning of combustible material. These materials may not burn by themselves. Prolonged exposure to fire or heat by these materials and/or their containers may result in an explosion. These materials may only be found in containers of 55-gallon capacity or smaller.

If material on fire or involved in fire

Flood with water

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 1500 feet

**FLAME RETARDANT COMPOUND, LIQUID
CORROSIVE MATERIAL**

4936570

NA1760

Flame retardant compound liquid is a variable colored material having the property of being corrosive to metals and/or tissue. It may or may not be water soluble.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use "alcohol" foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

**FLAMMABLE GAS, N.O.S. (See COMPRESSED GAS, N.O.S.,
FLAMMABLE GAS 4905710)**

**FLAMMABLE LIQUID, CORROSIVE, N.O.S.
FLAMMABLE LIQUID, CORROSIVE**

4907829

UN2924

Flammable liquid, corrosive, n.o.s. is the proper shipping name for those liquids having a closed cup flash point of less than 100 deg. F., being corrosive to steel and/or tissue, and not being specifically mentioned in the hazardous materials regulations. Try to ascertain the exact name of the material from the shipping papers.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use "alcohol" foam, carbon dioxide or dry chemical

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Do not use water on material itself

If large quantities of combustibles are involved, use water in flooding quantities as spray and fog

Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Do not use water on material itself

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

FLAMMABLE LIQUID, N.O.S. FLAMMABLE LIQUID

4910185
UN1993

Flammable liquid, n.o.s. is the proper shipping name for those materials having a closed cup flash point of less than 100 deg. F. and not specifically mentioned in the hazardous materials regulations.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

FLAMMABLE LIQUID, POISONOUS, N.O.S. FLAMMABLE LIQUID

4907422
UN1992

Flammable liquid, poisonous, n.o.s. is the proper shipping name for those liquids having a closed cup flash point of less than 100 deg. F., being toxic by ingestion, inhalation, or skin absorption, and not specifically mentioned in the hazardous materials regulations. Try to ascertain the exact name of this material from the shipping papers.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

FLAMMABLE SOLID, CORROSIVE, N.O.S. FLAMMABLE SOLID

4916755
UN2925

Flammable solid, corrosive, n.o.s. is the proper shipping name of any solid material other than one classed as an explosive which is liable under conditions incident to transportation to cause fires through friction, absorption of moisture, spontaneous chemical changes as a result of retained heat from the manufacturing or processing of the material, or which can be easily ignited by external sparks or flame and when so ignited burns vigorously and persistently. Also, the material is corrosive to metals and/or tissue. Try to ascertain the exact name of the material from the shipping papers.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of fire

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

FLAMMABLE SOLID, N.O.S. FLAMMABLE SOLID

4917332
UN1325

Flammable solid, n.o.s. is the proper shipping name of any solid material other than one classed as an explosive, or specifically listed by name in the list of hazardous materials which is liable under conditions incident to transportation to cause fires through friction, absorption of moisture, spontaneous chemical changes as a result of retained heat from the manufacturing or processing of the solid, or which can be readily ignited by external sparks or flame and when so ignited burns vigorously and persistently. Try to ascertain the exact name of the material.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of fire

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

FLAMMABLE SOLID, POISONOUS, N.O.S. FLAMMABLE SOLID, POISONOUS

4916615
UN2926

Flammable solid, poisonous, n.o.s. is the proper shipping name of any solid material other than one classed as an explosive which is liable under conditions incident to transportation to cause fires through friction, absorption of moisture, spontaneous chemical changes as a result of retained heat from the manufacturing or processing of the material, or which can be easily ignited by external sparks or flame and when so ignited burns vigorously and persistently. Also, the material is toxic by ingestion, inhalation, or skin absorption. Try to ascertain the exact name of the material from the shipping papers.

Continued on next page

If material on fire or involved in fire

Extinguish fire using agent suitable for type of fire

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Build dikes to contain flow as necessary

Personnel protection

Avoid breathing dusts, and fumes from burning material

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

**FLARES, HIGHWAY SAFETY, SOLIDIFIED FUEL,
OTHER THAN EXPLOSIVES OR FIREWORKS.
(FLAMMABLE SOLID, N.O.S.)**

4917445

FLAMMABLE SOLID

UN1325

Flares, highway safety, solidified fuel are pasteboard or fiber tubes containing a solid fuel that burn with an intense red, green, or yellow flame. Once ignited they can burn under water.

If material on fire or involved in fire

If fire is massive, back off, protect surroundings, and let burn

For scattered burning fusees, smother in dirt

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Avoid breathing fumes from burning material

**FLEXIBLE LINEAR SHAPED CHARGE, METAL CLAD
CLASS C EXPLOSIVE**

4903320

Flexible linear shaped charge, metal clad consists of a core containing not more than 15 grains of high explosive composition per foot and not exceeding 26 feet in length or containing not more than 2 1/2 grains of high explosive composition per foot covered with metal. It may be covered with tapes, yarns, plastics or waterproofing compounds.

If material on fire or involved in fire

Dangerously explosive

Flood with water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Approach fire with caution

Avoid breathing dusts, and fumes from burning material

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 1500 feet

**FLOOR COVERING UNDER LAYMENT COMPOUNDS,
NEC (FLAMMABLE LIQUID, N.O.S.)**

4910456

FLAMMABLE LIQUID

UN1993

Floor covering underlayment compounds, nec are various colored thick liquids. They have a flash point of less than 100 deg. F. They are generally heavier than water and insoluble in water. The vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

**FLOOR COVERING UNDERLAYMENT COMPOUNDS,
NEC (COMBUSTIBLE LIQUIDS, N.O.S.)**

4915456

COMBUSTIBLE LIQUID

NA1993

Floor covering underlayment compounds, nec are various colored thick liquids. They have a flash point between 100 and 199 deg. F. They are generally heavier than water and insoluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

FLOOR POLISH OR WAX (POLISH, WOOD, LIQUID)

4910271

FLAMMABLE LIQUID

NA1142

Floor polish or wax is a clear colorless to milky white or cream colored thick liquid. It has a flash point of less than 100 deg. F. It is generally heavier than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

FLOOR POLISH OR WAX (POLISH, WOOD, LIQUID) 4915271
COMBUSTIBLE LIQUID NA1142

Floor polish or wax is a clear colorless to milky white or cream colored thick liquid. It has a flash point between 100 and 199 deg. F. It is generally heavier than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

FLOUR BLEACHING COMPOUNDS, NEC (OXIDIZING MATERIAL, N.O.S.) 4918910

OXIDIZER UN1479

Flour bleaching compounds, nec are various materials which have the property of accelerating the burning of combustible material. These materials may not burn by themselves. Prolonged exposure to fire or heat by these materials and/or their containers may result in an explosion. These materials may be only packaged in containers of 55-gallon capacity or smaller.

If material on fire or involved in fire

- Flood with water
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 1500 feet

FLUOBORIC ACID 4930222
CORROSIVE MATERIAL, ACIDIC UN1775

Fluoboric acid is a colorless odorless liquid. It is soluble in water with release of heat. It is corrosive to metals and tissue.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

FLUORIC ACID (See HYDROFLUORIC ACID SOLUTION 4930022)

FLUORINE 4904030
NONFLAMMABLE GAS, OXIDIZING, POISONOUS, UN1045
CORROSIVE

Fluorine is a pale yellow gas with a pungent odor. It is toxic by inhalation. Contact with skin in lower than lethal concentration causes burns. It reacts with water to form hydrofluoric acid and oxygen. It is corrosive to most common materials. It reacts with most combustible materials to the point that ignition often occurs. It must be shipped in cylinders, not equipped with a safety relief device and in quantities not exceeding 6 pounds of gas per cylinder. Under fire conditions the cylinders are subject to violent rupturing and rocketing.

If material involved in fire

- Do not extinguish fire unless flow can be stopped
- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Do not use water on material itself
- Use water spray to absorb vapors

If material not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors
- Do not use water on material itself

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If material leaking (not on fire), downwind evacuation must be considered

FLUOROETHANE GASES, NONFLAMMABLE 4904538
(COMPRESSED GAS, N.O.S.) UN1956
NONFLAMMABLE GAS

Fluoroethane gases are colorless odorless gases. They are noncombustible. They can cause asphyxiation by the displacement of air. It may only be shipped in cylinders.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Attempt to stop leak if without hazard

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment

FLUOROPHOSPHORIC ACID, ANHYDROUS (See MONOFLUOROPHOSPHORIC ACID, ANHYDROUS 4930240)
FLUROSILICIC ACID (See HYDROFLUROSILICIC ACID 4930226)

FLUOSULFONIC ACID (OR) FLUOROSULFONIC ACID 4930010
CORROSIVE MATERIAL, ACIDIC, POISONOUS UN1777

Fluosulfonic acid is an odorless fuming liquid. It is soluble in water and is decomposed by water to hydrofluoric acid and sulfuric acid with release of heat. It is corrosive to metals and to tissue. The fumes and very short contact with small quantities of the acid can cause severe painful burns.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
 Use water in flooding quantities as fog
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to knock-down vapors
 Do not use water on material itself
 Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
 Keep upwind
 Avoid bodily contact with the material
 Wear full protective clothing
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 Wear self-contained breathing apparatus when fighting fires involving this material

FOOT WARMER OR HOT BOTTLE CHARGES, 4915476
CHEMICAL (COMBUSTIBLE LIQUID, N.O.S.)
COMBUSTIBLE LIQUID NA1993

Foot warmer or hot bottle charges, chemical are materials containing a solvent having a closed cup flash point between 100 and 199 deg. F. The hazard of these materials is combustibility.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

FOOT WARMER OR HOT BOTTLE CHARGES, 4910476
CHEMICAL (FLAMMABLE LIQUID, N.O.S.)
FLAMMABLE LIQUID UN1993

Foot warmer or hot bottle charges, chemical are materials containing a solvent having a closed cup flash point of less than 100 deg. F. The hazard of these materials is flammability.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

FORMALDEHYDE (OR) FORMALIN SOLUTION (IN 4940341
CONTAINERS OF 110 GALLONS OR LESS)
(FORMALDEHYDE, LIQUID)

ORM-A UN1198
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Formaldehyde is the colorless solution of formaldehyde gas in water. It is used to make plastics, other chemicals and fertilizers, as a preservative, as a corrosion inhibitor, and for many other uses. It is combustible and has a flash point varying from 122 to 185 deg. F. The gas readily vaporizes from the solution and is flammable over a wide vapor-air concentration range. It is heavier than water and is soluble in water. Its vapors are heavier than air.

It weighs 9.4 pounds per gallon.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Solid streams of water may be ineffective
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors or dusts
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder
 Apply "universal" gelling agent to immobilize spill

Environmental considerations—water spill

Use natural barriers or oil spill control booms to limit spill motion
 Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material
 Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
 Remove trapped material with suction hoses
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

**FORMALDEHYDE (OR) FORMALIN SOLUTION (IN
CONTAINERS OF 110 GALLONS OR LESS)
(FORMALDEHYDE, PASTE)**

4940342

ORM-A UN1198
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Formaldehyde is the colorless solution of formaldehyde gas in water. It is used to make plastics, other chemicals and fertilizers, as a preservative, as a corrosion inhibitor, and for many other uses. It is combustible and has a flash point varying from 122 to 185 deg. F. The gas readily vaporizes from the solution and is flammable over a wide vapor-air concentration range. It is heavier than water and is soluble in water. Its vapors are heavier than air.

It weighs 9.4 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors or dusts
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash or cement powder
- Apply "universal" gelling agent to immobilize spill

Environmental considerations—water spill

- Use natural barriers or oil spill control booms to limit spill motion
- Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material
- Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Remove trapped material with suction hoses
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

**FORMALDEHYDE, LIQUID (FORMALDEHYDE OR
FORMALIN SOLUTION)** 4913144
COMBUSTIBLE LIQUID UN1198
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Formaldehyde liquid is the colorless solution of formaldehyde gas in water. It is used to make plastics, other chemicals, and fertilizers, as a preservative, as a corrosion inhibitor, and for many other uses. It has a flash point varying from 122 to 185 deg. F. The gas readily vaporizes from solution and is flammable over a wide vapor air concentration range. The liquid is heavier than water and soluble in water. Its vapors are heavier than air.

It weighs 9.4 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash or cement powder
- Add sodium bisulfite (nahso3)

Environmental considerations—water spill

- Use natural barriers or oil spill control booms to limit spill motion
- Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material
- Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms
- Add sodium bisulfite
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Combustion products include corrosive or toxic vapors

**FORMALDEHYDE, PASTE (FORMALDEHYDE OR
FORMALIN SOLUTION)** 4913145
COMBUSTIBLE LIQUID UN1198
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Formaldehyde, paste is the thick mixture of paraformaldehyde the polymer of formaldehyde, formaldehyde and water having an irritating odor. Formaldehyde, itself, is a gas which readily vaporizes from the paste and is flammable over a wide vapor air concentration range. The paste has a flash point range of 122 to 185 deg. F. It is heavier than water and soluble in water. Its vapors are heavier than air.

It weighs 9.4 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Continued on next page

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Add sodium bisulfite (nahso3)

Environmental considerations—water spill

Use natural barriers or oil spill control booms to limit spill motion

Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material

Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms

Add sodium bisulfite

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Combustion products include corrosive or toxic vapors

FORMIC ACID

4931320

CORROSIVE MATERIAL, ACIDIC, COMBUSTIBLE

UN1779

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Formic acid is a colorless liquid with a pungent odor. It is combustible over a wide range of vapor air mixtures and has a flash point of 156 deg. F. It is soluble in water with release of heat. It is corrosive to metals and tissue.

It weighs 10.2 pounds per gallon.

If material on fire or involved in fire

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Vapor knockdown water is corrosive or toxic and should be diked for containment

FORMIC ACID SOLUTION

4931431

CORROSIVE MATERIAL, ACIDIC

UN1779

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Formic acid solution is the liquid material dissolved in water. It has a pungent odor. It is corrosive to metals and tissue.

It weighs 10.2 pounds per gallon.

If material on fire or involved in fire

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Vapor knockdown water is corrosive or toxic and should be diked for containment

FREIGHT FORWARDER TRAFFIC

4950130

Consult the shipping papers for the exact contents of the car, container, or trailer.

FUEL OIL

4915113

COMBUSTIBLE LIQUID

NA1993

Fuel oil is a straw yellow to dark colored liquid with a petroleum like odor. It has a flash point between 100 and 199 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may spread fire

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

FUEL OIL TREATING COMPOUNDS (CORROSIVE LIQUID, N.O.S.) 4936537**CORROSIVE MATERIAL UN1760**

Fuel oil treating compounds are various colored liquids. They are corrosive to metals and tissue. They may burn though it may require some effort to ignite.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use dry chemical, carbon dioxide, or dry sand
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- If material not on fire and not involved in fire**
- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

FUEL OIL, DIESEL (See FUEL OIL 4915113)**FUEL OIL, NO. 1,2,4, OR 5 4915112**
COMBUSTIBLE LIQUID NA1993

Fuel oil, no. 1, 2, 4, or 5 are straw yellow to dark colored liquids with a petroleum like odor. They have a flash point between 100 and 199 deg. F. They are lighter than water and insoluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

FUEL, AVIATION, TURBINE ENGINE 4909215
FLAMMABLE LIQUID UN1863

Fuel, aviation, turbine engine is a clear colorless to variable colored liquid with a petroleum like odor. It has a flash point in the range of -10 deg. F to 100 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

FUEL, AVIATION, TURBINE, ENGINE 4915167
COMBUSTIBLE LIQUID UN1863

Fuel, aviation, turbine, engine is a clear colorless to variable colored liquid with a faint petroleum like odor. It has a flash point of between 100 and 199 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

FUMARIC ACID 4966352
ORM-E NA9126
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Fumaric acid is a colorless crystalline solid. It is used to make paints and plastics, in food processing and preservation, and for other uses. It is slightly soluble in water. It is combustible though it may take some effort to ignite.

Continued on next page

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors or dusts
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water
- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Adjust pH to neutral (pH-7)
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**FUNGICIDES, AGRICULTURAL, NEC, LIQUID
(COMBUSTIBLE LIQUID, N.O.S.)
COMBUSTIBLE LIQUID**

4915198

NA1993

Fungicides, agricultural, nec, liquid, are various colored liquids. They consist of either a mixture of liquid materials or a solid dissolved in some solvent. They are generally lighter than water and are soluble in water. Prolonged exposure to the vapors or contact with liquid may result in poisoning by inhalation or skin absorption. Their flash point is between 100 and 200 deg. F. Their vapors are heavier than air. In case of damage to or leakage from containers of this material, contact the pesticide safety team network. Telephone 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind.
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

**FUMARYL CHLORIDE 4931740
CORROSIVE MATERIAL, ACIDIC, COMBUSTIBLE UN1780**

Fumaryl chloride is a straw colored fuming liquid with a pungent odor. It is combustible and has a flash point of 165 deg. F. Its fumes are irritating to the eyes and mucous membranes. It is decomposed by water to hydrochloric acid, a corrosive material, and water insoluble fumaric acid with release of heat. It is corrosive to metals and tissue.

If material on fire or involved in fire

- Use dry chemical or carbon dioxide
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

**FUNGICIDES, AGRICULTURAL, NEC, LIQUID 4910198
(FLAMMABLE LIQUID, N.O.S.)
FLAMMABLE LIQUID UN1993**

Fungicides, agricultural, nec, liquid are various colored liquids. They consist of either a mixture of liquid materials or a solid dissolved in some solvent. They are generally lighter than water and are soluble in water. Prolonged exposure to the vapors or contact with the liquid may result in poisoning by inhalation or skin absorption. Their flash point is below 100 deg. F. Their vapors are heavier than air. In case of damage to or leakage from containers of this material, contact the pesticide safety team network. Telephone 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

**FUNGICIDES, AGRICULTURAL, NEC, LIQUID
(POISONOUS LIQUID, N.O.S.)**

4921454

POISON B

NA2810

Fungicides, agricultural, nec, liquid, are various colored liquids. They consist of either a mixture of liquid materials or a solid dissolved in some solvent. They are generally lighter than water and are soluble in water. They are toxic by ingestion, skin absorption and inhalation. In case of damage to or leaking from containers of this material, contact the pesticide safety team network. Telephone 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**FUNGICIDES, AGRICULTURAL, NEC, OTHER THAN
LIQUID (POISONOUS SOLID, N.O.S.)**

4921456

POISON B

NA2811

Fungicides, agricultural, nec, other than liquid, are either a mixture of dry materials or a liquid adsorbed on some solid carrier. They are toxic by ingestion, inhalation (dust, etc) or skin absorption. In case of damage to or leaking from containers of this material, contact the pesticide safety team network. Telephone 800-424-9300.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

**FURAN
FLAMMABLE LIQUID**

4909175

UN2389

Furan is a clear colorless liquid. It has a flash point of less than 32 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**FURFURAL
COMBUSTIBLE LIQUID**

4913146

UN1199

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Furfural is a clear colorless liquid turning reddish brown on exposure to light and air having a penetrating odor of almonds. It has a flash point of 140 deg. F. it is heavier than water and is soluble in water. Its vapors are heavier than air.

It weighs 9.7 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash or cement powder
- Add sodium bisulfite (nahso3)

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Combustion products include corrosive or toxic vapors

MCD 000010002

**FURFURYL ALCOHOL (ALCOHOL, N.O.S.)
COMBUSTIBLE LIQUID**

**4913124
UN1987**

Furfuryl alcohol is a clear colorless liquid turning brown to dark red on exposure to light. It has a flash point of 167 deg. F. It reacts vigorously with most acids forming a black solid. It is heavier than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**FUSE IGNITER
CLASS C EXPLOSIVE**

4903445

Fuse igniters are small cylindrical pasteboard or metal tubes containing an igniting composition in one end with the other end open to permit it to be placed on safety fuse.

If material on fire or involved in fire

- Flood with water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Approach fire with caution
- Avoid breathing dusts, and fumes from burning material
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 1500 feet

**FUSE LIGHTER
CLASS C EXPLOSIVE**

4903450

Fuse lighters are small cylindrical pasteboard or metal tubes containing an igniting composition in one end with the other end open to permit it to be placed on safety fuse.

If material on fire or involved in fire

- Flood with water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Approach fire with caution
- Avoid breathing dusts, and fumes from burning material
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 1500 feet

**FUSE, SAFETY
CLASS C EXPLOSIVE.**

4903323

Safety fuse consists of a core of fine grained black powder encased in a fabric covering of yarn, tape, and a waterproofing compound. Under fire conditions it will only burn and not explode.

If material on fire or involved in fire

- Flood with water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Approach fire with caution
- Avoid breathing dusts, and fumes from burning material
- Wear self-contained breathing apparatus when fighting fires involving this material

**FUSEE (RAILWAY AND HIGHWAY)
FLAMMABLE SOLID**

**4917333
NA1325**

Fusees (railway and highway) are pasteboard or fiber tubes containing a pyrotechnic composition that burns with an intense red, green or yellow flame. Once ignited the fusee may burn under water.

If material on fire or involved in fire

- If fire is massive, back off, protect surroundings, and let burn
- For scattered burning fusees, smother in dirt

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Avoid breathing fumes from burning material

**FUSEE (TRUCK FLARES, STEEL, 24 GAUGE OR
THICKER)**

4917366

FLAMMABLE SOLID

NA1325

Fusees (truck flares, steel, 24 gauge or thicker) are metal devices containing a pyrotechnic composition. These devices are easily ignited and burn with an intense flame.

If material on fire or involved in fire

- If fire is massive, back off, protect surroundings, and let burn
- For scattered burning fusees, smother in dirt

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Avoid breathing fumes from burning material

**FUSEL OIL
COMBUSTIBLE LIQUID**

**4915169
UN1201**

Fusel oil is a clear colorless liquid with a mild odor. It has a flash point of 123 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection
 Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

GALENA ORE, CRUDE (LEAD SULFIDE) 4966994
ORM-E NA2291
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Galena ore, crude is stone with grey crystalline solid. It is used as the source mineral for lead. It is insoluble in water.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
 Build dikes to contain flow as necessary

Personnel protection

Keep upwind
 Wear boots, protective gloves, and goggles
 Avoid breathing vapors or dusts
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
 Remove trapped material with suction hoses
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

GAMBIER EXTRACTS, LIQUID (FLAMMABLE LIQUID, N.O.S.) 4910436
FLAMMABLE LIQUID UN1993

Gambier extracts, liquid are materials containing a solvent having a closed cup flash point of less than 100 deg. F. The hazard of these materials is flammability.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

GARBAGE TANKAGE (CONTAINING LESS THAN 8% MOISTURE) 4917346

FLAMMABLE SOLID NA1325

Garbage tankage is dried waste food products. If it has not been properly cooled or is too dry, it is liable to spontaneous heating and ignition.

If material on fire or involved in fire

Flood with water

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

GARBAGE TANKAGE (CONTAINING LESS THAN 8% WATER) 4917364

FLAMMABLE SOLID NA1325

Garbage tankage is dried waste food products. If it has not been properly cooled or is too dry, it is liable to spontaneous heating and ignition.

If material on fire or involved in fire

Flood with water

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

GAMBIER EXTRACTS, LIQUID (COMBUSTIBLE LIQUID, N.O.S.) 4915436
COMBUSTIBLE LIQUID NA1993

Gambier extracts, liquid are materials containing a solvent having a closed cup flash point between 100 and 199 deg. F. The hazard of these materials is combustibility.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

GAS DRIPS, HYDROCARBON 4915188
COMBUSTIBLE LIQUID UN1864

Gas drips, hydrocarbon are clear colorless to variable colored liquids. Their flash point is between 100 and 199 deg. F. They are lighter than water and insoluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may spread fire
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use foam, carbon dioxide or dry chemical

Continued on next page

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**GAS DRIPS, HYDROCARBON
FLAMMABLE LIQUID**

**4910188
UN1864**

Gas drips, hydrocarbon are clear colorless to variable colored liquids. Their flash point is below 100 deg. F. and is generally much lower. They are lighter than water and insoluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**GAS IDENTIFICATION SET
POISON A**

**4920510
NA9035**

Gas identification set is a collection of small quantities of poisonous liquids and gases, poison a and possibly irritating materials and chlorine. It is used to familiarize people with the smell of the various materials. The outside container must be either a wooden box or a specially constructed flanged steel cylinder.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**GAS IDENTIFICATION SET
IRRITATING MATERIAL**

**4925835
NA9035**

Gas identification set is a collection of small containers of irritating materials absorbed on an inert material. It is used to familiarize people with the smell of the various materials. The outside container must be either a wooden box or a specially constructed flanged steel cylinder.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**GAS MIXTURE, NEC, COMPRESSED, OTHER THAN
POISON (COMPRESSED GAS, N.O.S.)**

4904580

NONFLAMMABLE GAS

UN1956

Gas mixtures, nec are two or more gases shipped in the same container under pressure. The mixture may consist of both nonflammable and flammable gases with the mixture having nonflammable properties. The mixture can separate after leaking with either the flammable or nonflammable gas settling in low areas. It may asphyxiate by the displacement of air. It may only be shipped in cylinders. If the cylinder is an aerosol container, it can rupture and rocket under fire conditions.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Do not use water on material itself
- Use water spray to absorb vapors

If material not involved in fire

- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**GAS ODORANTS, NOT COMPRESSED GAS
(COMBUSTIBLE LIQUID, N.O.S.)**

4915474

COMBUSTIBLE LIQUID

NA1993

Gas odorants, not compressed gas are materials containing a solvent having a closed cup flash point between 100 and 199 deg. F. The hazard of these materials is combustibility.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**GAS ODORANTS, NOT COMPRESSED GAS 4910474
(FLAMMABLE LIQUID, N.O.S.)**

FLAMMABLE LIQUID UN1993

Gas odorants, not compressed gas are materials containing a solvent having a closed cup flash point of less than 100 deg. F. The hazard of these materials is flammability.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**GASOHOL 4907827
FLAMMABLE LIQUID NA1257**

Gasohol is a blend of gasoline and ethyl alcohol having an odor more of alcohol than gasoline. It is used as a motor fuel. It has a flash point of less than 0 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

**GASOLINE 4908178
FLAMMABLE LIQUID UN1203**

Gasoline is a clear colorless to amber colored volatile liquid with a petroleum like odor. It has a flash point of less than 0 deg. F. It is lighter than water and insoluble in water. The vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

**GASOLINE (GASOLINE NATURAL (CASING HEAD)) 4908176
FLAMMABLE LIQUID UN1203**

Gasoline is a clear colorless to amber colored volatile liquid with a petroleum like odor. It has a flash point of less than 0 deg. F. It is lighter than water and insoluble in water. The vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

**GASOLINE (GASOLINE, BLENDED)
FLAMMABLE LIQUID**

**4908177
UN1203**

Gasoline is a clear colorless to amber colored volatile liquid with a petroleum like odor. It has a flash point of less than 0 deg. F. it is lighter than water and insoluble in water. The vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

**GASOLINE PRESERVATIVE, NEC, LIQUID
(COMBUSTIBLE LIQUID, N.O.S.)**

4915478

COMBUSTIBLE LIQUID

NA1993

Gasoline preservative nec, liquid is a material containing a solvent having a closed cup flash point between 100 and 199 deg. F. The hazard of this material is combustibility.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**GASOLINE PRESERVATIVE, NEC, LIQUID
(FLAMMABLE LIQUID, N.O.S.)**

4910478

FLAMMABLE LIQUID

UN1993

Gasoline preservative nec, liquid is a material containing a solvent having a closed cup flash point of less than 100 deg. F. The hazard of this material is flammability.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

GERANIOL-NEROL MIXTURE (COMBUSTIBLE LIQUID, N.O.S.)

4913182

COMBUSTIBLE LIQUID

NA1993

Geraniol-nerol mixture is a colorless to pale yellow liquid having a pleasant flowery odor. it is used in perfumery and as a flavoring. It has a flash point of 176 deg. F. it is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**GERMANE
POISON A**

**4920120
UN2192**

Germane is a colorless gas with a pungent odor. it is used in making electronics. It is flammable. The gas is heavier than air and a flame can flash back to the source of leak very easily. It is toxic by inhalation. It may only be shipped in cylinders which may have to be overpacked in wooden or metal containers. Prolonged exposure of the cylinders to fire or heat may result in the cylinders violent rupturing and rocketing.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Solid streams of water may be ineffective
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Approach fire with caution
Avoid breathing dusts, and fumes from burning material
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 1500 feet

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

GRENADE, HAND, EXPLOSIVE**4901250****CLASS A EXPLOSIVE**

Hand grenade is a small metal device filled with explosives with or without other material such as toxic gas or tear gas, smoke or incendiary charge and a burster. Under fire conditions they will explode, fragmenting in the process.

If material on fire or involved in fire

Dangerously explosive
Do not fight fires in a cargo of explosives
Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Avoid breathing dusts, and fumes from burning material
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

GUANIDINE NITRATE**4918415****OXIDIZER, THERMALLY UNSTABLE****UN1467**

Guanidine nitrate is a white crystalline solid that is soluble in water. It takes some effort to ignite but once ignited it will burn with increasing vigor as the fire progresses. If contaminated with combustible materials will accelerate their burning. Prolonged exposure of guanidine nitrate to its containers to fire or heat may result in an explosion. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

Flood with water
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

Approach fire with caution

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 2500 feet

HAFNIUM METAL, DRY**4916711****FLAMMABLE SOLID****UN2545**

Hafnium metal, dry, is a greyish metallic colored powder. Dust from dry powder may be ignited by static electricity. The dry powder reacts with moisture to produce hydrogen, a flammable gas. The heat from this reaction may be sufficient to ignite the hydrogen. It does not appreciably react with large quantities of water.

If material on fire or involved in fire

Use suitable dry powder
Use dry chemical or carbon dioxide
Use water only if flooding quantities are available

HAFNIUM, METAL, WET**4916712****FLAMMABLE SOLID****UN1326**

Hafnium metal, wet is a greyish metallic colored sludge. Dust from dry powder may be ignited by static electricity. The dry powder reacts with moisture to produce hydrogen, a flammable gas. The heat from this reaction may be sufficient to ignite the hydrogen. It does not appreciably react with large quantities of water.

If material on fire or involved in fire

Use suitable dry powder
Use dry chemical or carbon dioxide
Use water only if flooding quantities are available

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

HAIR, WET**4917435****FLAMMABLE SOLID****NA1372**

Hair, wet is hair wet with water. It is liable to spontaneous heating and ignition.

If material on fire or involved in fire

Flood with water

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

HAND SIGNAL DEVICE**4903610-****CLASS C EXPLOSIVE**

Hand signal devices are a metal, cardboard or plastic tube containing a pyrotechnic composition which produces either a flare or smoke upon functioning.

If material on fire or involved in fire

Flood with water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Approach fire with caution
Avoid breathing dusts, and fumes from burning material
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 1500 feet

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If material leaking (not on fire), downwind evacuation must be considered

GLUE CATALYST, NEC (COMBUSTIBLE LIQUID, N.O.S.) 4915454

COMBUSTIBLE LIQUID NA1993

Glue catalyst, nec is a material containing a solvent having a closed cup flash point between 100 and 199 deg. F. The hazard of this material is combustibility.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

GLUE CATALYST, NEC (FLAMMABLE LIQUID, N.O.S.) 4910454

FLAMMABLE LIQUID UN1993

Glue catalyst, nec is a material containing a solvent having a closed cup flash point of less than 100 deg. F. The hazard of this material is flammability.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

GLYCERINE, CRUDE, (SPENT LYE), CONCENTRATED 4936541

(CORROSIVE LIQUID, N.O.S.)

CORROSIVE MATERIAL, BASIC UN1760

Glycerine, crude, (spent lye), concentrated is a colorless to brown, colored liquid. It is soluble in water. It is combustible though it may require some effort to ignite. The residual sodium hydroxide (lye) is what cause this material to be corrosive to metals and/or tissue.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

GLYCOL ETHERS (COMBUSTIBLE LIQUID, N.O.S.) 4913194

COMBUSTIBLE LIQUID NA1993

Glycol ethers are clear colorless liquids, with odors varying from none to mildly pleasant. They are used as a solvent for paints and plastics, and as a reaction medium for chemical synthesis. They have flash points between 100 and 200 deg. F. They are lighter than water and are soluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

GRENADE, EMPTY, PRIMED 4903245

Grenade, empty, primed is a grenade shell devoid of any bursting charge but which has the primer installed.

If material on fire or involved in fire

- Flood with water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Continued on next page

HAZARDOUS SUBSTANCE, LIQUID (OR) SOLID, N.O.S. 4960132
ORM-E NA9188
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Hazardous substance, liquid (or) solid, n.o.s. Specifically named in the hazardous materials regulations that has been determined to be hazardous to the environment if released.

Consult the shipping papers for the exact contents of the car, trailer, or container.

HAZARDOUS WASTE, LIQUID (OR) SOLID, N.O.S. 4960131
ORM-E NA9189
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Hazardous waste, liquid (or) solid, n.o.s. Specifically named in the hazardous materials regulations that is being shipped to an epa designated disposal facility.

Consult the shipping papers for the exact contents of the car, trailer, or container.

HEATER FOR REFRIGERATOR CAR, LIQUID FUEL 4910195
TYPE

FLAMMABLE LIQUID NA1993

Heater for refrigerator car, liquid fuel types are mechanical devices for heating refrigerator cars. They may only be shipped containing fuel if shipped in carload or truckload quantities. The hazard is flammability which will depend upon the specific fuel.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

HELIUM 4904540
NONFLAMMABLE GAS UN1046

Helium is a colorless odorless gas. It is lighter than air and is noncombustible.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Attempt to stop leak if without hazard

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment

HELIUM—ARGON GAS MIXTURE (COMPRESSED 4904542
GAS, N.O.S.)

NONFLAMMABLE GAS

UN1956

Helium—argon gas mixture is a colorless odorless gas. Both helium and argon are noncombustible. Helium is lighter than air and argon is heavier than air. It can cause asphyxiation by the displacement of air. It may only be shipped in cylinders.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Attempt to stop leak if without hazard

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment

HELIUM—OXYGEN MIXTURE 4904430
NONFLAMMABLE GAS NA1980

Helium-oxygen mixture is a colorless odorless gas. Both helium and oxygen are noncombustible; however, oxygen will accelerate the combustion of a fire. It may only be shipped in cylinders.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Attempt to stop leak if without hazard

Personnel protection

- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Approach fire with caution

HELIUM-BUTANE GAS MIXTURE (COMPRESSED GAS, 4904543
N.O.S.)

NONFLAMMABLE GAS

UN1956

Helium-butane gas mixture is a colorless odorless gas. While helium is non-combustible and butane is flammable, the mixture is nonflammable. The mixture can separate with the butane settling into low areas. It may only be shipped in cylinders.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Attempt to stop leak if without hazard

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment

HELIUM-BUTANE GAS, MIXTURE (COMPRESSED GAS, N.O.S.) 4905840
FLAMMABLE GAS UN1954

Helium butane gas mixture is a colorless gas with a faint odor of petroleum. It is easily ignited and may only be shipped in cylinders. Helium is lighter than air and noncombustible, butane is flammable and heavier than air. A flame may flash back to the source of leak very easily. Under fire conditions cylinders may violently rupture and rocket.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

HELIUM-ISOBUTANE GAS MIXTURE (COMPRESSED GAS, N.O.S.) 4904544
NONFLAMMABLE GAS UN1956

Helium-isobutane gas mixture is a colorless odorless gas. While helium is noncombustible and isobutane is flammable. The mixture is nonflammable. The mixture can separate with the isobutane settling into low areas. It may only be shipped in cylinders.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Attempt to stop leak if without hazard

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment

HELIUM-NITROGEN MIXTURE (COMPRESSED GAS, N.O.S.) 4904545
NONFLAMMABLE GAS UN1956

Helium-nitrogen mixture is colorless odorless gas. Both helium and nitrogen are noncombustible. It may only be shipped in cylinders.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Attempt to stop leak if without hazard

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment

HELIUM-ISOBUTANE GAS MIXTURE (COMPRESSED GAS, N.O.S.) 4905842
FLAMMABLE GAS UN1954

Helium-isobutane gas mixture is a colorless gas with a faint petroleum like odor. It is easily ignited and may only be shipped in cylinders. Helium is lighter than air and noncombustible, isobutane is heavier than air and flammable. A flame may flash back to the source of leak very easily. Under fire conditions cylinders may violently rupture and rocket.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

HEPTACHLOR 4980630
ORM-E NA2781
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Heptachlor is a white to light tan waxy looking solid. It is used as an insecticide. It is non-combustible. It is insoluble in water. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone- 800-424-9300.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use foam, carbon dioxide or dry chemical
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

HEPTANE

FLAMMABLE LIQUID

4909190

UN1206

Heptane is a clear colorless liquid with a petroleum-like odor. It has a flash point of 25 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

HEXACHLOROCYCLOPENTADIENE

CORROSIVE MATERIAL, POISONOUS

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

4933015

UN2646

Hexachlorocyclopentadiene a pale yellow liquid with a pungent odor. It is noncombustible and solidifies at 50 deg. F. It is insoluble in water. It is toxic by skin absorption and inhalation. It is corrosive to tissue. It weighs 14.3 pounds per gallon.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
Use water spray to absorb vapors

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

HEXADECYL TRICHLOROSILANE

CORROSIVE MATERIAL, ACIDIC

4934250

UN1781

Hexadecyl trichlorosilane is a colorless to yellow liquid with a pungent odor. Material will burn though it may require some effort to ignite. It is decomposed by moisture or water to hydrochloric acid with evolution of heat. It is corrosive to metals and tissue.

If material on fire or involved in fire

Use dry chemical, carbon dioxide, or dry sand
Do not use water on material itself
If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
Use water spray to absorb vapors
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors
Do not use water on material itself
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

HEXADIENE

FLAMMABLE LIQUID

4908184

UN2458

Hexadiene is a clear, colorless liquid with a petroleum like odor. It has a flash point of less than 0 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

Continued on next page

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

**HEXAETHYL TETRAPHOSPHATE MIXTURE, DRY 4921423
(CONTAINING NOT MORE THAN 2% HEXAETHYL
TETRAPHOSPHATE)**

POISON B NA2783

Hexaethyl tetraphosphate mixture, dry is a liquid absorbed on a dry carrier. Hexaethyl tetraphosphate itself is soluble in water and is difficult to burn. It is toxic by skin absorption and inhalation (dust, etc.). In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone; 800-424-9300

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

**HEXAETHYL TETRAPHOSPHATE MIXTURE, DRY 4921431
(CONTAINING MORE THAN 2% HEXAETHYL
TETRAPHOSPHATE)**

POISON B NA2783

Hexaethyl tetraphosphate mixture, dry is a liquid absorbed on a dry carrier. Hexaethyl tetraphosphate itself is soluble in water and is difficult to burn. It is toxic by skin absorption and inhalation (dust, etc.). In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone; 800-424-9300

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

**HEXAETHYL TETRAPHOSPHATE MIXTURE, LIQUID 4921432
(CONTAINING MORE THAN 25% HEXAETHYL
TETRAPHOSPHATE)**

POISON B NA2783

Hexaethyl tetraphosphate mixture, liquid is the yellow liquid dissolved in a solvent. The mixture is soluble in water. The combustibility of the mixture will depend on the solvent used. It is toxic by inhalation and by skin absorption. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone; 800-424-9300

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If material leaking (not on fire), downwind evacuation must be considered

**HEXAETHYL TETRAPHOSPHATE MIXTURE, LIQUID 4921441
(CONTAINING NOT MORE THAN 25%
HEXAETHYL TETRAPHOSPHATE)**

POISON B NA2783

Hexaethyl tetraphosphate mixture, liquid is the yellow liquid dissolved in a solvent. The mixture is soluble in water. The combustibility of the mixture will depend on the solvent used. It is toxic by inhalation and by skin absorption. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone; 800-424-9300

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If material leaking (not on fire), downwind evacuation must be considered

**HEXAETHYL TETRAPHOSPHATE, LIQUID
POISON B**

**4921430
UN1811**

Hexaethyl tetraphosphate, liquid is a yellow liquid. It is soluble in water and difficult to burn. It is toxic by skin absorption and inhalation. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone; 800-424-9300

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If material leaking (not on fire), downwind evacuation must be considered

**HEXAETHYL TETRAPHOSPHATE AND COMPRESSED
GAS MIXTURE
POISON A**

**4920515
UN1812**

Hexaethyltetraphosphate and compressed gas mixture is a liquid material charged with a gas. Hexaethyltetraphosphate is a yellow liquid and is lethal by skin absorption and inhalation. The material may only be shipped in cylinders, and these must be over packed in either a wooden box or a fiberboard box. Prolonged exposure of the cylinders to fire or heat may result in the violent rupturing and rocketing of the cylinders. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone; 800-424-9300

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If material leaking (not on fire), downwind evacuation must be considered

**HEXAFLUOROPHOSPHORIC ACID
CORROSIVE MATERIAL, ACIDIC, POISONOUS**

**4930015
UN1782**

Hexafluorophosphoric acid is a colorless fuming liquid. It is soluble in water with release of heat. It is corrosive to metals and tissue.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

**HEXAFLUOROPROPYLENE
NONFLAMMABLE GAS**

**4904546
UN1858**

Hexafluoropropylene is an odorless, colorless gas. It is noncombustible. It can asphyxiate by the displacement of air.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Personnel protection

Avoid breathing vapors
Keep upwind
Wear protective gloves and goggles
Do not handle broken packages without protective equipment

**HEXAFLUOROPROPYLENE OXIDE
NONFLAMMABLE GAS**

**4904548
NA1956**

Hexafluoropropylene oxide is a colorless odorless gas. It is shipped as a liquefied gas under its vapor pressure. Contact with the liquid can cause frostbite. Its vapors are heavier than air.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Personnel protection

Avoid breathing vapors

Keep upwind

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

Personnel protection

Avoid breathing dusts, and fumes from burning material

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**3,3,6,6,9,9-HEXAMETHYL-1,2,4,5-
TETRAOXOCYCLONONANE, (NOT MORE THAN
52% WITH INERT SOLID)**

4919169

ORGANIC PEROXIDE

UN2166

3,3,6,6,9,9-hexamethyl-1,2,4,5-tetraoxocyclononane, (not more than 52% with inert solid) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Keep spilled material wet

Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**3,3,6,6,9,9-HEXAMETHYL-1,2,4,5-
TETRAOXOCYCLONONANE, (NOT MORE THAN
52% IN SOLUTION)**

4919168

ORGANIC PEROXIDE

UN2167

3,3,6,6,9,9-hexamethyl-1,2,4,5-tetraoxocyclononane, (not more than 52% in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

**HEXALDEHYDE
FLAMMABLE LIQUID**

**4909185
UN1207**

Hexaldehyde is a clear colorless liquid with a pungent odor. It has a flash point of 90 deg. F. It is lighter than water and is insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may spread fire

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

**3,3,6,6,9,9-HEXAMETHYL-1,2,4,5-
TETRAOXOCYCLONONANE, (TECHNICALLY
PURE)**

4919277

ORGANIC PEROXIDE

UN2165

3,3,6,6,9,9-hexamethyl-1,2,4,5-tetraoxocyclononane, (technically pure) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Keep spilled material wet

Wet spilled material before picking it up

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

**HEXANOIC ACID
CORROSIVE MATERIAL, ACIDIC****4931434
NA1760**

Hexanoic acid is a colorless to light yellow liquid with an odor of limburger cheese. It will burn though it may take some effort to ignite. It is slightly soluble in water. It is corrosive to metals and tissue.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

**HEXYL ALCOHOL, OTHER THAN PERFUMERY
GRADE (ALCOHOL, N.O.S.)
COMBUSTIBLE LIQUID****4913126
UN1987**

Hexyl alcohol is a clear colorless liquid. It has a flash point of 149 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**HEXYL TRICHLOROSILANE
CORROSIVE MATERIAL, ACIDIC****4934255
UN1784**

Hexyl trichlorosilane is a colorless liquid with a pungent odor. It is decomposed by moist air or water to hydrochloric acid with evolution of heat. It is corrosive to metals and tissue.

If material on fire or involved in fire

- Use dry chemical, carbon dioxide, or dry sand
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog

Use water spray to absorb vapors

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

**HIGH EXPLOSIVE
CLASS A EXPLOSIVE****4901502**

High explosive is the proper shipping name for those solid materials having the property of detonating when initiated by a commercial number 8 electric blasting cap. It is a variable colored solid. It does not function by burning. Most high explosives will burn once ignited by a flame and many will burn quietly if the quantity is small or the material is thinly spread over a large area. If large quantities are involved in the fire, or if the material is confined, or is packaged for shipment, the material can explode en masse without warning.

If material on fire or involved in fire

- Dangerously explosive
- Do not fight fires in a cargo of explosives
- Evacuate area and let burn

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep spilled material wet
- Wet spilled material before picking it up
- Do not attempt to sweep up dry material

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 5000 feet

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**HEXAMETHYLENE DIAMINE SOLUTION
CORROSIVE MATERIAL, BASIC**

**4935645
UN1783**

Hexamethylene diamine solution is a clear colorless liquid. It is used to make nylon. It will burn though it may require some effort to ignite. It is soluble in water. It is corrosive to metals and tissue. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Solid streams of water may be ineffective
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

**HEXAMETHYLENE DIAMINE, SOLID
CORROSIVE MATERIAL, BASIC**

**4935640
UN2280**

Hexamethylene diamine, solid is a colorless crystalline solid. It is soluble in water. It is corrosive to metals and tissue. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Solid streams of water may be ineffective
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

**HEXAMETHYLENE IMINE
CORROSIVE MATERIAL, BASIC, FLAMMABLE,
POISONOUS**

**4935650
UN2493**

Hexamethylene imine is a colorless liquid with an ammonia like odor. It is flammable and has a flash point of 65 deg. F. It is toxic by ingestion. It is soluble in water. It is corrosive to metals and tissue. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Solid streams of water may be ineffective
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

**HEXANE
FLAMMABLE LIQUID**

**4908183
UN1208**

Hexane is a clear colorless liquid with a petroleum like odor. It is used as a solvent, paint thinner, and chemical reaction medium. It has a flash point of -9 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Continued on next page

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep spilled material wet
- Wet spilled material before picking it up
- Do not attempt to sweep up dry material

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 5000 feet

**HYDRAZINE, ANHYDROUS
FLAMMABLE LIQUID, POISONOUS, CORROSIVE
THERMALLY UNSTABLE**

4906225

UN2029

Hydrazine, anhydrous is a colorless, fuming oily liquid with an ammonia like odor. It has a flash point of 99 deg. F. It can ignite spontaneously on contact with oxidizers, and may ignite spontaneously on contact with porous materials such as earth, wood, and cloth. It is toxic by inhalation and by skin absorption. It is corrosive to tissue. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical.

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
- If material leaking (not on fire), downwind evacuation must be considered

**HYDRAZINE, AQUEOUS SOLUTION
CORROSIVE MATERIAL, BASIC, POISONOUS**

4935030

UN2030

Hydrazine, aqueous solution is a colorless liquid with an ammonia like odor. It is combustible though it may require some effort to ignite. Contact with oxidizing materials may result in spontaneous ignition. It is toxic by inhalation and by skin absorption. It is corrosive to tissue. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water

- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet

**HYDRIODIC ACID
CORROSIVE MATERIAL**

4930226

UN1787

Hydriodic acid is a colorless to yellow liquid with a pungent odor. Its fumes are irritating to the eyes and mucous membranes. It is soluble in water with release of heat. It is corrosive to metals and to tissue.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

**HYDROBROMIC ACID (MORE THAN 49% STRENGTH)
CORROSIVE MATERIAL, ACIDIC**

4930227

UN1788

Hydrobromic acid is a colorless to yellow liquid with a pungent odor. Its fumes are irritating to the eyes and mucous membranes. It is soluble in water with release of heat. It is corrosive to metals and tissue.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Neutralize spilled material with crushed limestone, soda ash, or lime

**HIGH EXPLOSIVE (NITROCELLULOSE, DRY)
CLASS A EXPLOSIVE**

4901520

Nitrocellulose, dry is a white fibrous to amorphous powder, or a compressed block or stick. It can be detonated with a commercial number 8 electric blasting cap. It will burn once ignited with a flame and will continue to burn vigorously if the quantity is small or the material is thinly spread over a large area. If large quantities are involved in the fire, or if the material is confined, or is packaged for shipment, the material can explode en masse without warning.

If material on fire or involved in fire

Dangerously explosive

Do not fight fires in a cargo of explosives

Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep spilled material wet

Wet spilled material before picking it up

Do not attempt to sweep up dry material

Personnel protection

Avoid breathing dusts, and fumes from burning material

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

**HIGH EXPLOSIVE (NITROSTARCH, DRY)
CLASS A EXPLOSIVE**

4901530

Nitrostarch, dry is a white solid. It can be detonated with a commercial number 8 electric blasting cap. It will burn once ignited with a flame and will continue to burn vigorously if the quantity is small or the material is thinly spread over a large area. If large quantities are involved in the fire, or if the material is confined, or is packaged for shipment, the material can explode en masse without warning.

If material on fire or involved in fire

Dangerously explosive

Do not fight fires in a cargo of explosives

Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep spilled material wet

Wet spilled material before picking it up

Do not attempt to sweep up dry material

Personnel protection

Avoid breathing dusts, and fumes from burning material

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

**HIGH EXPLOSIVE (PICRIC ACID, DRY)
CLASS A EXPLOSIVE**

4901510

Picric acid is a yellow crystalline solid. It can be detonated with a commercial number 8 electric blasting cap. It will burn once ignited by a flame and will continue to burn quietly if the quantity is small or the material is thinly spread over a large area. If large quantities are involved in the fire, or if the material is confined, or is packaged for shipment, the material can explode en masse without warning.

If material on fire or involved in fire

Dangerously explosive

Do not fight fires in a cargo of explosives

Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep spilled material wet

Wet spilled material before picking it up

Do not attempt to sweep up dry material

Personnel protection

Avoid breathing dusts, and fumes from burning material

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

**HIGH EXPLOSIVE (TRINITROTOLUOL, DRY)
CLASS EXPLOSIVE**

4901540

Trinitrotoluol, dry is a yellow crystalline solid. It can be detonated with a commercial number 8 electric blasting cap. It will burn once ignited by a flame and will continue to burn quietly if the quantity is small or the material is thinly spread over a large area. If large quantities are involved, or the material is confined, or is packaged for shipment, the material can explode en masse without warning.

If material on fire or involved in fire

Dangerously explosive

Do not fight fires in a cargo of explosives

Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep spilled material wet

Wet spilled material before picking it up

Do not attempt to sweep up dry material

Personnel protection

Avoid breathing dusts, and fumes from burning material

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

**HIGH EXPLOSIVE, LIQUID
CLASS A EXPLOSIVE**

4901504

High explosive, liquid is the proper shipping name for those liquid materials having the property of detonating when initiated by a number 8 electric blasting cap. They are various colored liquids and slurries. They do not function by burning. They are sensitive to shock or impact. Most high explosives, liquid will burn once ignited by a flame and many will burn quietly if the quantity is small or the material is thinly spread over a large area. If large quantities are involved in the fire, or if the material is confined, or is packaged for shipment, the material can explode en masse without warning.

If material on fire or involved in fire

Dangerously explosive

Do not fight fires in a cargo of explosives

Evacuate area and let burn

Continued on next page

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

HYDROBROMIC ACID, ANHYDROUS (See HYDROGEN BROMIDE 4904260)**HYDROBROMIC ACID, NOT MORE THAN 49% STRENGTH CORROSIVE MATERIAL 4930232 UN1788**

Hydrobromic acid is a colorless to yellow liquid with a pungent odor. Its fumes are irritating to the eyes and mucous membranes. It is soluble in water with release of heat. It is corrosive to metals and tissue.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

HYDROCARBON GAS, LIQUEFIED FLAMMABLE GAS 4905749 UN1965

Hydrocarbon gas, liquefied is a colorless gas with a faint petroleum like odor shipped as a liquefied gas under its vapor pressure. For transportation it may be stented. Contact with the liquid can cause frostbite. It is easily ignited. Its vapor is heavier than air and a flame can flash back to source of leak very easily. The leak can be either a liquid or vapor leak. It can asphyxiate by the displacement of air. Under fire conditions the cylinders or tank cars may violently rupture and rocket.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind

Wear protective gloves and goggles

- Do not handle broken packages without protective equipment
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
- If material leaking (not on fire), downwind evacuation must be considered

HYDROCARBON GAS, NONLIQUEFIED FLAMMABLE GAS 4905779 UN1964

Hydrocarbon gas, nonliquefied is a colorless gas with a faint petroleum like odor. It is easily ignited and may only be shipped in cylinders. A flame may flash back to the source of leak very easily. Under fire conditions the cylinders may violently rupture and rocket.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
 - Use water in flooding quantities as fog
 - Cool all affected containers with flooding quantities of water
 - Apply water from as far a distance as possible
- If material not on fire and not involved in fire**
- Keep sparks, flames, and other sources of ignition away
 - Keep material out of water sources and sewers
 - Attempt to stop leak if without hazard
 - Use water spray to knock-down vapors

Personnel protection

- Keep upwind
- Wear self-contained breathing apparatus
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

HYDROCARBON GAS, NONLIQUEFIED (COAL GAS) FLAMMABLE GAS 4905708 UN1964

Coal gas is a colorless gas. It has a faint petroleum odor unless there are impurities to give it the characteristic odor of the impurity; commonly hydrogen sulfide, rotten eggs; or benzene, aromatic. It is easily ignited and may only be shipped in cylinders. A flame may flash back to the source of leak very easily. Under fire conditions the cylinders may violently rupture and rocket.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

HYDROCHLORIC ACID 4930228
CORROSIVE MATERIAL, ACIDIC UN1789
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Hydrochloric acid is a colorless to yellow liquid with a pungent odor. It is used for cleaning masonry and metals, manufacturing chemicals, in petroleum production, and for many other uses. Its fumes are irritating to the eyes and mucous membranes. It is soluble in water with release of heat. It is corrosive to metals and tissue.

It weighs 10.1 pounds per gallon.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Vapor knockdown water is corrosive or toxic and should be diked for containment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Vapor knockdown water is corrosive or toxic and should be diked for containment

HYDROCHLORIC ACID MIXTURE 4930229
CORROSIVE MATERIAL, ACIDIC NA1789
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Hydrochloric acid mixtures are colorless to yellow liquids. Its fumes are irritating to the eyes and mucous membranes. It is soluble in water with release of heat. It is corrosive to metals and tissue.

It weighs 10.1 pounds per gallon.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Vapor knockdown water is corrosive or toxic and should be diked for containment

HYDROCHLORIC ACID SOLUTION, INHIBITED 4930230
CORROSIVE MATERIAL, ACIDIC NA1789
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Hydrochloric acid solution, inhibited is a colorless to yellow liquid. Its fumes are irritating to the eyes and mucous membranes. It is soluble in water with release of heat. It contains some material which cuts its rate of corrosivity to metals compared to the uninhibited acid. It is corrosive to metals and tissue.

It weighs 10.1 pounds per gallon.

HYDROCHLORIC ACID (MURIATIC ACID, SPENT) 4930231
CORROSIVE MATERIAL UN1789
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Muriatic acid, spent is a dark colored liquid with a pungent odor. Its fumes are irritating to the eyes and mucous membranes. It is soluble in water with release of heat. It is corrosive to metals and tissue.

It weighs 10.1 pounds per gallon.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Vapor knockdown water is corrosive or toxic and should be diked for containment

**HYDROCHLORIC ACID, ANHYDROUS (See
HYDROGEN CHLORIDE 4904270)**

**HYDROCYANIC ACID, LIQUEFIED 4920125
POISON A, FLAMMABLE NA1051
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)**

Hydrocyanic acid, liquefied is a colorless gas with a faint aromatic odor. It is shipped as a liquefied gas under its vapor pressure and it must be stabilized to avoid polymerization. It is easily ignited. The vapor is just lighter than air but a flame can travel back to the source of leak very easily. It can polymerize from contact with alkali. Lethal amounts may be absorbed through the skin, as well as by inhalation. It may be shipped in cylinders or tank cars. Prolonged exposure to fire or heat may cause the cylinder or tank car to violently rupture and rocket.

It weighs 5.7 pounds per gallon.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Solid streams of water may be ineffective

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet

If material leaking (not on fire) evacuate for a radius of 2500 feet

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

Use natural barriers or oil spill control booms to limit spill motion

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Vapor knockdown water is corrosive or toxic and should be diked for containment

HYDROCYANIC ACID, SOLUTION

4920130

POISON A, FLAMMABLE

UN1613

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)

Hydrocyanic acid, solution is hydrocyanic acid, a gas dissolved in water. It is a clear colorless liquid with a faint aromatic odor. It is flammable though the lower concentrations may require some effort to ignite. The vapor is lighter than air, but a flame can flash back to the source of the leak very easily. Lethal amounts may be absorbed through the skin as well as by inhalation.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Solid streams of water may be ineffective

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet

If material leaking (not on fire) evacuate for a radius of 2500 feet

Continued on next page

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Vapor knockdown water is corrosive or toxic and should be diked for containment

HYDROCYANIC ACID, SOLUTION, LESS THAN 5% 4921417
HYDROCYANIC ACID

POISON B UN1613

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)

Hydrocyanic acid solution is water containing up to 5% dissolved hydrocyanic acid with the faint odor of almonds. It is toxic by inhalation and skin absorption.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Vapor knockdown water is corrosive or toxic and should be diked for containment

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Add soda ash

Adjust pH to neutral (pH-7)

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Vapor knockdown water is corrosive or toxic and should be diked for containment

HYDROFLUORIC ACID, ANHYDROUS (OR) 4930024
HYDROGEN FLUORIDE

CORROSIVE MATERIAL, ACIDIC, POISONOUS UN1052
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Hydrofluoric acid, anhydrous is a colorless fuming liquid boiling at 67 deg. F. It is used as a catalyst and raw material in chemical manufacture. It is shipped as a liquid or liquefied gas under its vapor pressure. It is soluble in water with release of heat. It is corrosive to metals and tissue. The fumes and very short contact with small quantities of the liquid can cause severe painful burns.

It weighs 8.2 pounds per gallon.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Neutralize spilled material with crushed limestone, soda ash, or lime

HYDROFLUORIC ACID SOLUTION 4930022
CORROSIVE MATERIAL, ACIDIC, POISONOUS UN1790
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Hydrofluoric acid solution is a colorless fuming liquid with a pungent odor. It is soluble in water with release of heat. It is corrosive to metals and tissue. The fumes and very short contact with small quantities of the liquid can cause severe painful burns.

It weighs 9.6 pounds per gallon.

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear full protective clothing
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If material leaking (not on fire) evacuate for a radius of 2500 feet

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
 Absorb bulk liquid with fly ash or cement powder
 Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
 Add soda ash
 Adjust pH to neutral (pH-7)
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors
 Vapor knockdown water is corrosive or toxic and should be diked for containment

HYDROFLUORIC AND SULFURIC ACID MIXTURES 4930020
CORROSIVE MATERIAL, ACIDIC, POISONOUS UN1788
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Hydrofluoric and sulfuric acid, mixture is a clear colorless liquid with a pungent odor. It is soluble in water with release of heat. It is corrosive to metals and tissue. The fumes and very short contact with small quantities of the acid can cause severe, painful burns.

It weighs 15.3 pounds per gallon.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
 Use water in flooding quantities as fog
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to knock-down vapors
 Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
 Absorb bulk liquid with fly ash or cement powder
 Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors
 Vapor knockdown water is corrosive or toxic and should be diked for containment

HYDROFLUOSILICIC ACID

4930026

CORROSIVE MATERIAL, ACIDIC, POISONOUS

NA1778

Hydrofluosilicic acid is a colorless fuming liquid with a penetrating pungent odor. It is used in water fluoridation, in hardening cement and ceramics, as a wood preservative, and for many other uses. It is soluble in water with release of heat. It is corrosive to metals and tissue. The fumes and very short contact with small quantities of the liquid can cause severe painful burns.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
 Use water in flooding quantities as fog
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to knock-down vapors
 Do not use water on material itself
 Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 If contact with the material anticipated, wear full protective clothing

HYDROGEN

4905746

FLAMMABLE GAS

UN1049

Hydrogen is a colorless, odorless gas. It is easily ignited. It is lighter than air, but a flame can flash back to the source of the leak very easily. It is flammable over a wide range of vapor air concentrations. It may be shipped in cylinders and special tank cars. Under fire conditions the cylinders may violently rupture and rocket.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Attempt to stop leak if without hazard
 Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear protective gloves and goggles
 Do not handle broken packages without protective equipment
 Approach fire with caution

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
 If material leaking (not on fire), downwind evacuation must be considered

**HYDROGEN BROMIDE
NONFLAMMABLE GAS, CORROSIVE**

**4904260
UN1048**

Hydrogen bromide is a colorless gas with a pungent irritating odor. It is used to make other chemicals and as a catalyst in the manufacture of chemicals. The gas is corrosive. It dissolves in water to form hydrobromic acid, a corrosive material. The vapor is heavier than air. It may only be shipped in cylinders.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use water spray to absorb vapors

If material not involved in fire

Keep material out of water sources and sewers

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Neutralize spilled material with crushed limestone, soda ash, or lime

Do not use water on material itself

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If material leaking (not on fire), downwind evacuation must be considered

**HYDROGEN CHLORIDE
NONFLAMMABLE GAS, CORROSIVE
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)**

**4904270
UN1050**

Hydrogen chloride is a colorless gas with a pungent odor. The gas is corrosive to metals and tissue and irritating to the eyes and respiratory system. It dissolves in water to form hydrochloric acid, a corrosive material. The vapor is heavier than air.

It weighs 9.9 pounds per gallon.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use water spray to absorb vapors

If material not involved in fire

Keep material out of water sources and sewers

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Neutralize spilled material with crushed limestone, soda ash, or lime

Do not use water on material itself

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder
Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Vapor knockdown water is corrosive or toxic and should be diked for containment

HYDROGEN IODIDE SOLUTION (See HYDRIODIC ACID 4930226)

**HYDROGEN PEROXIDE SOLUTION (OVER 52%
PEROXIDE)
OXIDIZER, CORROSIVE, THERMALLY UNSTABLE**

4918335

UN2015

Hydrogen peroxide solution is a colorless liquid dissolved in water. It is used to bleach textiles and wood pulp, in chemical manufacturing and food processing, and in water purification. Its vapors are irritating to the eyes and mucous membranes. The material can violently decompose on contact with most common metals and their compounds. Contact with combustible material can result in spontaneous ignition. It is corrosive to tissue. Under exposure to fire or heat containers of the material can violently rupture due to decomposition of the material.

If material involved in fire

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors

Keep upwind

Wear respiratory protection if material is misting

Wear boots, protective gloves, and goggles

Avoid bodily contact with the material

If contact with the material anticipated, wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet

**HYDROGEN PEROXIDE SOLUTION (40% TO 52%
PEROXIDE)**

4918776

OXIDIZER, CORROSIVE

UN2014

Hydrogen peroxide solution is the colorless liquid dissolved in water. Its vapors are irritating to the eyes and mucous membranes. It is corrosive to tissue. The material can violently decompose on metals and their compounds. Contact with combustible material can result in spontaneous ignition. Under exposure to fire or heat containers of the material can violently rupture due to the decomposition of the material.

If material involved in fire

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear respiratory protection if material is misting
- Wear boots, protective gloves, and goggles
- Avoid bodily contact with the material
- If contact with the material anticipated, wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

HYDROGEN SULFATE (See SULFURIC ACID 4930040)

HYDROGEN PEROXIDE SOLUTION (8% TO 40% PEROXIDE) 4918775
OXIDIZER, CORROSIVE UN2014

Hydrogen peroxide solution is the colorless liquid dissolved in water. Its vapors are irritating to the eyes and mucous membranes. The material, especially the higher concentrations, can violently decompose in contact with most common metals and their compounds. Contact with combustible materials can result in spontaneous ignition. Under prolonged exposure to fire or heat containers of the material may violently rupture due to decomposition of the material.

If material involved in fire

- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear respiratory protection if material is misting
- Wear boots, protective gloves, and goggles
- Avoid bodily contact with the material
- If contact with the material anticipated, wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

HYDROGEN SELENIDE 4905415
FLAMMABLE GAS, POISONOUS UN2202

Hydrogen selenide is a colorless gas with an offensive odor. It is soluble in water. It is irritating to the eyes and mucous membranes. It is heavier than air. It may only be shipped in cylinders.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

HYDROGEN SULFIDE 4905410
FLAMMABLE GAS, POISONOUS UN1053
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Hydrogen sulfide is a colorless gas having the odor of rotten eggs. It is shipped as a liquefied gas under its own vapor pressure. One's sense of smell becomes rapidly fatigued in atmospheres containing hydrogen sulfide and hence cannot be counted on to warn of the continued presence of the gas. Contact with the liquid can cause frostbite. The gas is heavier than air and a flame can flash back to the source of leak very easily. Under fire conditions cylinders and tank cars may violently rupture and rocket. It is soluble in water.

It weighs 8.3 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet

- If material leaking (not on fire) evacuate for a radius of 2500 feet

Environmental considerations—land spill

- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

- Absorb bulk liquid with fly ash or cement powder
- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Vapor knockdown water is corrosive or toxic and should be diked for containment

**HYDROGEN, LIQUEFIED
FLAMMABLE GAS**

**4905745
UN1966**

Hydrogen, liquefied is hydrogen gas which has been compressed and condensed as a liquid at very low temperatures, boiling point -442 deg. F. It is a colorless liquid and may be shipped only in special very heavily insulated cylinders and tank cars. Contact with the liquid will cause frostbite. Hydrogen gas at normal temperatures is lighter than air but until vapors from the liquid warms up it will be heavier than air. It is very easily ignited and a flame will flash back to the source of the leak very easily. The leak could either be a liquid or vapor leak. The tank car or cylinder is required to vent the vapor as it is normally given off. Under fire conditions the tank car or cylinder may violently rupture and rocket.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Do not use water on material itself

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors
- Do not use water on material itself

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

**HYDROSILICOFLUORIC ACID (See HYDROFLUOROSILICIC ACID
4930026)**

**HYDROXY ALDEHYDE WASTES (COMBUSTIBLE
LIQUID, N.O.S.)**

4915488

COMBUSTIBLE LIQUID

NA1993

Hydroxy aldehyde wastes is a material containing a solvent having a closed cup flash point between 100 and 199 deg. F. The hazard of this material is combustibility.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

**HYDROXY ALDEHYDE WASTES (FLAMMABLE
LIQUID, N.O.S.)**

4910488

FLAMMABLE LIQUID

UN1993

Hydroxy aldehyde wastes is a material containing a solvent having a closed cup flash point of less than 100 deg. F. The hazard of this material is flammability.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**HYDROXYETHYLACRYLATE (CORROSIVE
LIQUID, N.O.S.)**

4935675

CORROSIVE MATERIAL

UN1780

Hydroxyethylacrylate is a clear colorless liquid. It is used to make plastics. It is corrosive to tissue. It is also combustible and has a flash point of 120 deg. F. If the material is subject to heat or becomes contaminated, it is liable to polymerize with release of heat. If the polymerization takes place inside a container, the container is subject to violent rupture. It is lighter than water and is slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

HYDROXYPROPYL ACRYLATE (CORROSIVE LIQUID, N.O.S.) 4935510
CORROSIVE MATERIAL, POISONOUS UN1760
POLYMERIZABLE

Hydroxypropyl acrylate is a clear colorless liquid. It is used to make plastics. It is toxic by inhalation and skin absorption, and is corrosive to tissue. It is also combustible and has a flash point of 136 deg. F. If the material is subject to heat or becomes contaminated, it is liable to polymerize with release of heat. If the polymerization takes place inside a container, the container is subject to violent rupture. It is lighter than water and is slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

HYPOCHLORITE SOLUTION (CONTAINING MORE THAN 7% AVAILABLE CHLORINE BY WEIGHT) 4936335
CORROSIVE MATERIAL UN1791
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Hypochlorite solutions are colorless to light yellow liquids having a chlorine like odor. They consist of a hypochlorite compound dissolved in water. They are corrosive to metals and tissue.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash or cement powder
- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

HYPOCHLORITE SOLUTION CONTAINING NOT MORE THAN 7% AVAILABLE CHLORINE (BY WEIGHT) 4944145

ORM-A NA1791
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Hypochlorite solution containing not more than 7% available chlorine (by weight) is the white crystalline solid dissolved in water having a faint odor of chlorine. It is used as a bleach for textiles and paper pulp, for water purification, to make other chemicals, and for many other uses. It is corrosive to aluminum.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

- Absorb bulk liquid with fly ash or cement powder

- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

IGNITER 4903465

CLASS C EXPLOSIVE

Igniter consists of a fiberboard, plastic, paper, or metal tube containing a small quantity of igniting compound which is ignited by the action of a primer, pull wire or scratch composition.

If material on fire or involved in fire

- Flood with water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Approach fire with caution
- Avoid breathing dusts, and fumes from burning material
- Wear self-contained breathing apparatus when fighting fires involving this material

IGNITER CORD 4903455
CLASS C EXPLOSIVE

Igniter cord consists of textile yarns and/or a wire uniformly covered with a combustible chemical mixture, with or without additional textile or wire counterings waterproofing or finishing coatings which, when ignited burns externally at various rates according to design.

If material on fire or involved in fire

Flood with water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Approach fire with caution

Avoid breathing dusts, and fumes from burning material

Wear self-contained breathing apparatus when fighting fires involving this material

IGNITER FUSE-METAL CLAD 4903460
CLASS C EXPLOSIVE

Igniter fuse-metal clad is an explosive igniter composition encased in a metal tube.

If material on fire or involved in fire

Flood with water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Approach fire with caution

Avoid breathing dusts, and fumes from burning material

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 1500 feet

IGNITER, JET THRUST (JATO) 4901360
CLASS A EXPLOSIVE

Igniter, jet thrust (jato) is a device consisting of an electrically or remotely controlled ignition element and a charge of deflagrating type explosive. They are used to ignite the propelling charge of jet thrust units.

If material on fire or involved in fire

Dangerously explosive

Do not fight fires in a cargo of explosives

Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Avoid breathing dusts, and fumes from burning material

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

IGNITER, JET THRUST (JATO) 4902540
CLASS B EXPLOSIVE

Igniter, jet thrust (jato) are devices consisting of an electrically or remotely controlled ignition element and a charge of deflagrating type explosive. They are used to ignite the propelling charge of jet thrust units.

If material on fire or involved in fire

Dangerously explosive

Do not fight fires in a cargo of explosives

Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Avoid breathing dusts, and fumes from burning material

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

IGNITER, ROCKET MOTOR 4902550
CLASS B EXPLOSIVE

Igniters, rocket motor are devices consisting of electrically or remotely controlled ignition elements and a deflagrating type of explosive. They are used to ignite the propulsion charge of rocket motors.

If material on fire or involved in fire

Dangerously explosive

Do not fight fires in a cargo of explosives

Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Avoid breathing dusts, and fumes from burning material

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

IGNITER, ROCKET MOTOR 4901362
CLASS A EXPLOSIVE

Igniter, rocket motor is a device consisting of an electrically or remotely controlled ignition element and a deflagrating type of explosive. They are used to ignite the propelling charge of rocket motors.

If material on fire or involved in fire

Dangerously explosive

Do not fight fires in a cargo of explosives

Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Avoid breathing dusts, and fumes from burning material

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

IMINOBISPROPYLAMINE 4935658
CORROSIVE MATERIAL, BASIC, COMBUSTIBLE UN2269

Iminobispropylamine is a colorless liquid, with an ammonia-like odor. It is combustible and has a flash point of 175 deg. F. It is soluble in water. It is corrosive to metals and tissue. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Solid streams of water may be ineffective

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

**INITIATING EXPLOSIVE (DIAZODINITROPHENOL) 4901430
CLASS A EXPLOSIVE**

Diazodinitrophenol is a yellow crystalline solid that darkens on exposure to sunlight. It must be shipped wet with at least 40% water or water and denatured alcohol mixture. If it should dry out it can explode due to shock, heat, flame or friction. Upon prolonged exposure to fire or heat containers of the wet material will explode.

If material on fire or involved in fire

- Dangerously explosive
- Do not fight fires in a cargo of explosives
- Evacuate area and let burn

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep spilled material wet
- Wet spilled material before picking it up
- Do not attempt to sweep up dry material

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 5000 feet

**INITIATING EXPLOSIVE (FULMINATE OF MERCURY, WET) 4901420
CLASS A EXPLOSIVE**

Fulminate of mercury, wet is shipped as a slurry or wet mass of white crystals. It must be shipped wet with at least 25% water or water-ethyl alcohol mixture. If it should dry out, it can explode due to shock, heat, flame, or friction. Upon prolonged exposure to fire or heat containers of the wet material will explode.

If material on fire or involved in fire

- Dangerously explosive
- Do not fight fires in a cargo of explosives
- Evacuate area and let burn

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep spilled material wet
- Wet spilled material before picking it up
- Do not attempt to sweep up dry material

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 5000 feet

**INITIATING EXPLOSIVE (GUANYL NITROSAMINO
GUANYLIDENE HYDRAZINE)
CLASS A EXPLOSIVE**

4901435

Guanyl nitrosamino guanylidene hydrazine is a colorless to pale yellow fluffy crystalline solid. It must be shipped wet with at least 30% water or water and denatured ethyl alcohol mixture. Dry it will detonate due to shock, heat, flame, or friction. Containers of the wet material can explode on prolonged exposure to fire or heat.

If material on fire or involved in fire

- Dangerously explosive
- Do not fight fires in a cargo of explosives
- Evacuate area and let burn

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep spilled material wet
- Wet spilled material before picking it up
- Do not attempt to sweep up dry material

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 5000 feet

**INITIATING EXPLOSIVE (LEAD AZIDE, DEXTRINATED TYPE ONLY) 4901440
CLASS A EXPLOSIVE**

Lead azide is shipped as a wet slurry or mass of colorless crystals. It must be shipped wet with at least 20% water or water and denatured ethyl alcohol mixture. If it should dry out, it may explode or detonate due to shock, heat, flame or friction. Under prolonged exposure to fire or heat containers of the wet material will explode.

If material on fire or involved in fire

- Dangerously explosive
- Do not fight fires in a cargo of explosives
- Evacuate area and let burn

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep spilled material wet
- Wet spilled material before picking it up
- Do not attempt to sweep up dry material

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 5000 feet

**INITIATING EXPLOSIVE (LEAD
MONONITRORESORCINATE)
CLASS A EXPLOSIVE**

4901445

Lead mononitroresorcinate is shipped as a slurry or wet mass of reddish-brown crystals. It must be shipped wet with at least 40% water or water and denatured alcohol mixture. If it should dry out, it can explode due to shock, heat, flame, or friction. Upon prolonged exposure to fire or heat containers of the wet material will explode.

Continued on next page

If material on fire or involved in fire

Dangerously explosive
Do not fight fires in a cargo of explosives
Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep spilled material wet
Wet spilled material before picking it up
Do not attempt to sweep up dry material

Personnel protection

Avoid breathing dusts, and fumes from burning material
Wear protective gloves and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

INITIATING EXPLOSIVE (LEAD STYPHNATE)(LEAD TRINITRORESORCINATE) 4901450

CLASS A EXPLOSIVE

Lead styphnate is shipped as slurry or wet mass of orange-yellow crystals. It must be shipped wet with at least 20% water or water and denatured ethyl alcohol mixture. If it should dry out, it can explode due to shock, heat, flame or friction. Upon prolonged exposure to fire or heat containers of the wet material will explode.

If material on fire or involved in fire

Dangerously explosive
Do not fight fires in a cargo of explosives
Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep spilled material wet
Wet spilled material before picking it up
Do not attempt to sweep up dry material

Personnel protection

Avoid breathing dusts, and fumes from burning material
Wear protective gloves and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

INITIATING EXPLOSIVE (NITROSOGUANIDINE) 4901460

CLASS A EXPLOSIVE

Nitrosoguanidine is shipped as a slurry or wet mass of pale yellow crystals. It must be shipped wet with at least 10% water. If it should dry out it can explode due to shock, heat, flame, or friction. Upon prolonged exposure to fire or heat containers of the wet material will explode.

If material on fire or involved in fire

Dangerously explosive
Do not fight fires in a cargo of explosives
Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep spilled material wet
Wet spilled material before picking it up
Do not attempt to sweep up dry material

Personnel protection

Avoid breathing dusts, and fumes from burning material
Wear protective gloves and goggles
Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

INITIATING EXPLOSIVE (PENTAERYTHRITETETRANITRATE)

4901465

CLASS A EXPLOSIVE

Pentaerythritetetrinitrate is shipped as a slurry or wet mass of white crystals. It must be shipped wet with at least 40% water or water and denatured alcohol mixture. If it should dry out, it can explode due to shock, heat, flame or friction. Upon prolonged exposure to fire or heat containers of the wet material will explode.

If material on fire or involved in fire

Dangerously explosive
Do not fight fires in a cargo of explosives
Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep spilled material wet
Wet spilled material before picking it up
Do not attempt to sweep up dry material

Personnel protection

Avoid breathing dusts, and fumes from burning material
Wear protective gloves and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

INITIATING EXPLOSIVE (TETRAZENE) (GUANYL NITROSOAMINO GUANYL TETRAZENE)

4901470

CLASS A EXPLOSIVE

Tetrazene is shipped as a slurry or wet mass of light yellow fluffy solid. It must be shipped wet with at least 30% water or water and denatured alcohol mixture. If it should dry out it can explode due to shock heat, flame, or friction. Upon prolonged exposure to fire or heat containers of the wet material will explode.

If material on fire or involved in fire

Dangerously explosive
Do not fight fires in a cargo of explosives
Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep spilled material wet
Wet spilled material before picking it up
Do not attempt to sweep up dry material

Personnel protection

Avoid breathing dusts, and fumes from burning material
Wear protective gloves and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

**INITIATING EXPLOSIVES (NITRO MANNITE)
CLASS A EXPLOSIVE**

4901455

Nitro mannite is shipped as a slurry or wet mass of colorless crystals. It must be shipped wet with at least 40% water or water and denatured alcohol mixture. If it should dry out, it can explode due to shock, heat, flame, or friction. Upon prolonged exposure to fire or heat containers of the wet material will explode.

If material on fire or involved in fire

Dangerously explosive
Do not fight fires in a cargo of explosives
Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep spilled material wet
Wet spilled material before picking it up
Do not attempt to sweep up dry material

Personnel protection

Avoid breathing dusts, and fumes from burning material
Wear protective gloves and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

**INK (INK MATERIALS, NEC)
COMBUSTIBLE LIQUID**

**4915206
NA1993**

Ink materials, nec may contain a flammable solvent. Its flash point is between 100 and 199 deg. F. The hazard is combustibility.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**INK (INK, PRINTING, NEC)
FLAMMABLE LIQUID**

**4910205
UN1210**

Ink, printing, nec is various colored liquids or fluid pastes. It has a flash point of less than 100 deg. F. It is generally lighter than water and insoluble in water.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**INK MATERIALS, NEC (FLAMMABLE LIQUID, N.O.S.)
FLAMMABLE LIQUID**

**4910206
UN1993**

Ink materials, nec may contain a flammable solvent. Its flash point is less than 100 deg. F. The hazard is flammability.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**INK, PRINTING, NEC (INK)
COMBUSTIBLE LIQUID**

**4915205
UN2867**

Ink, printing, nec is various colored liquids, fluids, or pastes. It has a flash point between 100 and 199 deg. F. It is generally lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**INSECTICIDE ADHESIVES, LIQUID (ADHESIVE, N.O.S.) 4915502
COMBUSTIBLE LIQUID NA1133**

Insecticide adhesives, liquid are the solutions of various gums and resins in various solvents. The liquids are generally quite thick and range from a clear colorless to a black "tar". The flash point depends on the solvent used, but it will be between 100 and 199 deg. F. The hazard of this material is combustibility.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

INSECTICIDE ADHESIVES, LIQUID (ADHESIVES, N.O.S.) 4910502

FLAMMABLE LIQUID NA1133

Insecticide adhesives, liquid are the solutions of various gums and resins in various solvents. The liquids are generally quite thick and range from a clear colorless to a black "tar". The flash point depends on the solvent used. But it will be below 100 deg. F. The hazard of this material is flammability.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

INSECTICIDE ADHESIVES, SPREADERS OR STICKERS, LIQUID (CORROSIVE LIQUID, N.O.S.) 4936594

CORROSIVE MATERIAL UN1760

Insecticide adhesives, spreaders or stickers, liquid are various colored liquids having the property of being corrosive to metals and/or tissue. It may be combustible though requiring some effort to ignite. It may or may not be water soluble.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

INSECTICIDE, DRY, N.O.S. (AGRICULTURAL INSECTICIDES OR FUNGICIDES, NEC, OTHER THAN LIQUID) 4921435

POISON B NA2588

Insecticide, dry is a material which have the property of being toxic by ingestion, inhalation or skin absorption. Contact the pesticide safety team network. Telephone: 800-424-9300

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

INSECTICIDE, DRY, N.O.S. (INSECTICIDES, INSECT OR ANIMAL REPELLENTS OR VERMIN EXTERMINATORS, NEC, OTHER THAN AGRICULTURAL) 4921434

POISON B NA2588

Insecticide, dry, n.o.s. is a material which have the property of being toxic by ingestion, inhalation or skin absorption.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

**INSECTICIDE, LIQUEFIED GAS
NONFLAMMABLE GAS**

**4904830
NA1968**

Insecticide, liquefied gas are nonflammable formulations using a liquefied nonflammable gas as a propellant to disperse the material. While the material doesn't meet dot poison definitions prolonged breathing of the fumes should be avoided. It may only be shipped in cylinders or aerosol containers. Exposure of the aerosol containers to fire or heat can result in their rupturing and rocketing.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use water spray to absorb vapors

If material not involved in fire

Keep material out of water sources and sewers

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

**INSECTICIDE, LIQUID, N.O.S.
FLAMMABLE LIQUID**

**4910210
NA1993**

Insecticide, liquid is the proper shipping name for those materials having closed cup flash point of less than 100 deg. F. and not specifically mentioned in the hazardous materials regulations. Prolonged exposure to the vapors or contact with the liquid may result in death through inhalation or skin absorption, though the main hazard is flammability.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

**INSECTICIDE, LIQUID, N.O.S.
COMBUSTIBLE LIQUID**

**4915210
NA1993**

Insecticide, liquid is the proper shipping name for those materials having a closed cup flash point between 100 and 199 deg. F. and not specifically mentioned in the hazardous materials regulations. Prolonged exposure to the vapors or contact with the liquid may result in death through inhalation or skin absorption, though the main hazard is combustibility.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

**INSECTICIDE, LIQUID, N.O.S. (AGRICULTURAL
INSECTICIDES OR FUNGICIDES, NEC, LIQUID)
POISON B**

4921436

NA2902

Insecticide, liquid, n.o.s. is a liquid material which has the property of being toxic by ingestion, inhalation, or skin absorption. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

**INSECTICIDE, LIQUID, N.O.S. (INSECTICIDES OR
FUNGICIDES, AGRICULTURAL, NEC, LIQUID)
FLAMMABLE LIQUID**

4910197

NA1993

Insecticide liquid, n.o.s. is the proper name for those materials having a closed cup flash point of less than 100 deg. F. and not specifically mentioned in the hazardous materials regulations. Although the main hazard is flammability, prolonged exposure to the vapors or contact with the liquid may result in death through inhalation or skin absorption. In case of damage to or leaking from containers of this material, contact the pesticide safety team network. Telephone 800-424-9300.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

Continued on next page

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

INSECTICIDE, LIQUID, N.O.S. (INSECTICIDES OR FUNGICIDES, AGRICULTURAL, NEC, LIQUID) 4915197
COMBUSTIBLE LIQUID NA1993

Insecticide liquid n.o.s., is the proper shipping name for those materials having a closed cup flash point between 100 and 200 deg.f and not specifically mentioned in the hazardous materials regulations. Prolonged exposure to the vapors or contact with the liquid may result in illness or death through inhalation or skin absorption though the main hazard is combustibility. In case of damage to or leakage from containers of this material, contact the pesticide safety team network. Telephone 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

INSECTICIDE, LIQUEFIED GAS, CONTAINING POISON A MATERIAL OR POISON B MATERIAL 4920550
POISON A NA1967

Insecticide, liquefied gas, containing poison a material or poison b material are formulations using a liquefied gas as a propellant to disperse the poison a or b material. It may only be shipped in cylinders which may have to be overpacked in wooden or metal containers. Prolonged exposure of the cylinders to fire or heat may result in the violent rupturing and rocketing of the cylinders. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300

If material involved in fire

- Do not extinguish fire unless flow can be stopped
- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If material leaking (not on fire), downwind evacuation must be considered

INSTANTANEOUS FUSE 4903470
CLASS C EXPLOSIVE

Instantaneous fuse is cotton yarn impregnated with a finely-powdered deflagrating composition. It is overspun with tape and yarn, and is used to ignite multiple lengths of safety fuse from a common point.

If material on fire or involved in fire

- Flood with water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Approach fire with caution
- Avoid breathing dusts, and fumes from burning material
- Wear self-contained breathing apparatus when fighting fires involving this material

IODINE MONOCHLORIDE 4932345
CORROSIVE MATERIAL UN1792

Iodine monochloride is a reddish brown oily liquid becoming a solid at 81 deg. F. It has a pungent odor. It is decomposed by water into iodine, iodic acid and hydrochloric acid with release of heat. It is corrosive to metals and tissue.

If material involved in fire

- Use dry chemical, carbon dioxide, or dry sand
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog

- Use water spray to absorb vapors

- Cool all affected containers with flooding quantities of water

- Apply water from as far a distance as possible

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

**IODINE PENTAFLUORIDE
OXIDIZER, POISONOUS, CORROSIVE**

**4918215
UN2495**

Iodine pentafluoride is a colorless fuming liquid. It is decomposed by water to iodine and hydrofluoric acid. Contact with organic materials may result in spontaneous ignition. It is corrosive to metals and tissue. It may only be shipped in cylinders not equipped with safety relief devices. Prolonged exposure of the cylinder to fire may result in their violent rupturing and rocketing.

If material involved in fire

- Do not use water on material itself
- Use dry chemical or carbon dioxide
- Cool all affected containers with flooding quantities of water
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors

If material not involved in fire

- Keep material out of water sources and sewers
- Do not use water on material itself
- Use water spray to knock-down vapors
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

**IRON CHLORIDE, SOLID (See FERRIC CHLORIDE,
SOLID 4944138)**

**IRON MASS OR SPONGE (NOT PROPERLY OXIDIZED) 4916717
FLAMMABLE SOLID NA1383**

Iron mass or sponge (not properly oxidized) is finely divided iron oxide on a wood shavings base. If the iron is not completely oxidized the iron sponge is liable to spontaneous heating as the remaining iron is oxidized. The heat from the oxidation may be sufficient to ignite the material. Iron sponge is fairly easily ignited by sparks or heat from external sources.

If material on fire or involved in fire

Flood with water

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear boots, protective gloves, and goggles

**IRON MASS, (OR) SPONGE, SPENT (IRON SPONGE, 4916718
SPENT, OR SPENT OXIDE) UN1376
FLAMMABLE SOLID**

Iron mass (or) sponge, spent is iron sponge saturated with sulfur from gas purification. It is quite liable to spontaneous heating. This heat may be sufficient to ignite the iron mass. It is also fairly easily ignited by sparks or heat from external sources.

If material on fire or involved in fire

Flood with water

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear boots, protective gloves, and goggles

**IRON SESQUICHLORIDE, SOLID (See FERRIC
CHLORIDE, SOLID 4944138)**

**IRON SULPHATE (FERRIC), DRY, CRUDE (FERRIC 4963823
SULFATE)**

**ORM-E NA9121
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)**

Iron sulphate (ferric), dry, crude is a yellow crystalline to greyish white powder. It is used in water purification, as a soil conditioner, and for many other uses. It is slightly soluble in water. It is non-combustible.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
- Adjust ph to neutral (ph-7)
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**IRON SULPHATE (FERRIC), DRY, OTHER THAN 4963818
CRUDE (FERRIC SULFATE)**

**ORM-E NA9121
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)**

Ferric sulphate is a yellow crystalline or greyish white powder. It is used in water purification, as a soil conditioner, as a disinfectant, and for many other uses. It is soluble in water. It is non-combustible.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
- Adjust ph to neutral (ph-7)
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**IRON, POWDERED, NEC (FLAMMABLE SOLID, N.O.S.) 4916769
FLAMMABLE SOLID UN1325**

Iron, powdered, nec is a grey lustrous powder. It is used in powder metallurgy, and as a catalyst in chemical manufacture. It may react with water to give off hydrogen, a flammable gas. The heat from this reaction may be sufficient to ignite the hydrogen.

If material on fire or involved in fire

Use water only if flooding quantities are available

Use graphite, soda ash, powdered sodium chloride, or suitable dry powder

If material not on fire and not involved in fire

Do not use water

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Keep material dry

Personnel protection

Avoid breathing dusts, and fumes from burning material

Wear boots, protective gloves, and goggles

**IRRITATING AGENT, N.O.S. 4925830
IRRITATING MATERIAL NA1693**

Irritating agent, n.o.s. is the proper shipping name for those materials not specifically mentioned in the regulations having the property of giving fumes that are extremely irritating to the eyes and mucous membranes when exposed to air, or contact with fire. Try to ascertain the exact material.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use "alcohol" foam, carbon dioxide or dry chemical

Cool all affected containers with flooding quantities of water

Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

**ISO HEPTYL ALCOHOL (ALCOHOL, N.O.S.) 4913122
COMBUSTIBLE LIQUID UN1987**

Iso heptyl alcohol is a clear colorless liquid with a pleasant odor. It is used to make other chemicals, as a solvent, and in cosmetic formulations. It has a flash point of 106 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

**ISOAMYL ALCOHOL (ALCOHOL, N.O.S.) 4913127
COMBUSTIBLE LIQUID UN1987**

Isoamyl alcohol is a clear colorless liquid with a disagreeable odor. It has a flash point of 114 deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may spread fire

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

**ISOBUTANE 4905747
FLAMMABLE GAS UN1075**

Isobutane is a colorless gas with a faint petroleum like odor. It is shipped as a liquefied gas under its vapor pressure. Contact with the liquid can cause frostbite. It is easily ignited. Its vapor is heavier than air and a flame can flash back to the source of leak very easily. The leak can either be a liquid or vapor leak. It can asphyxiate by the displacement of air. Under fire conditions the cylinders or tank car may violently rupture and rocket.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

Approach fire with caution

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet

If material leaking (not on fire), downwind evacuation must be considered

ISOBUTANE (ISOBUTANE FOR FURTHER REFINERY PROCESSING) 4905750

FLAMMABLE GAS UN1075

Isobutane is a colorless gas with a faint petroleum like odor. It is used in aerosol propellant, to make other chemicals, and for many other uses it is shipped as a liquefied gas under its vapor pressure. Contact with the liquid can cause frostbite. It is easily ignited. Its vapors are heavier than air and a flame can flash back to the source of leak very easily. The leak can be either a liquid or vapor leak. It can asphyxiate by the displacement of air. Under fire conditions the cylinders or tank cars may rupture and rocket.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
- If material leaking (not on fire), downwind evacuation must be considered

ISOBUTYL ACETATE 4909207
FLAMMABLE LIQUID UN1213

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Isobutyl acetate is a clear colorless liquid with a fruity odor. It has a flash point of 64 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

It weighs 7.2 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash or cement powder
- Apply fluorocarbon-water foam to diminish vapor and fire hazard

Environmental considerations—water spill

- Use natural barriers or oil spill control booms to limit spill motion
- Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material

Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Remove trapped material with suction hoses

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

ISOBUTYL ALCOHOL (BUTYL ALCOHOL) 4909131
FLAMMABLE LIQUID NA1120

Isobutyl alcohol is a clear colorless liquid. It has a flash point of 82 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ISOBUTYLACRYLATE (FLAMMABLE LIQUID, N.O.S.) 4907263
FLAMMABLE LIQUID UN1993
POLYMERIZABLE

Isobutyl acrylate is a clear colorless liquid with an acrid odor. It has a flash point of 86 deg. F. The vapors are irritating to the eyes and respiratory system. If the material is subjected to heat for prolonged periods or becomes contaminated, it is subject to polymerization. If the polymerization takes place inside a container, the container may violently rupture. The material is lighter than water and slightly soluble in water.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

ISOBUTYLAMINE 4908186
FLAMMABLE LIQUID UN1214
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Isobutylamine is a clear colorless liquid with a fish like odor. It has a flash point of 15 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

It weighs 6.1 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents
- Apply fluorocarbon-water foam to diminish vapor and fire hazard
- Neutralize with sodium bisulfate (nahso4)

Environmental considerations—water spill

- Add sodium bisulfate
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors
- Vapor knockdown water is corrosive or toxic and should be diked for containment

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
- If material leaking (not on fire), downwind evacuation must be considered

ISOBUTYRALDEHYDE (FLAMMABLE LIQUID, N.O.S.) 4908185
FLAMMABLE LIQUID UN1993

Isobutyraldehyde is a clear colorless liquid having a pungent odor. It is used to make other chemicals. It has a flash point of -40 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

ISOBUTYRIC ACID 4931438
CORROSIVE MATERIAL, ACIDIC, COMBUSTIBLE UN2529
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Isobutyric acid is a colorless liquid with a light odor of rancid butter. It is combustible and has a flash point of 132 deg. F. It is soluble in water. It is corrosive to metals and tissue.

It weighs 7.9 pounds per gallon.

ISOBUTYLENE 4905748
FLAMMABLE GAS UN1075

Isobutylene is a colorless gas with a faint petroleum like odor. For transportation it may be stenciled. It is shipped as a liquefied gas under its vapor pressure. Contact with the liquid can cause frostbite. It is easily ignited. Its vapors are heavier than air and a flame can flash back to the source of leak very easily. The leak can either be in liquid or vapor leak. It can asphyxiate by the displacement of air. Under fire conditions the cylinder or tank car may violently rupture and rocket.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
Absorb bulk liquid with fly ash or cement powder
Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors
Vapor knockdown water is corrosive or toxic and should be diked for containment

ISOBUTYRIC ANHYDRIDE

4931439

CORROSIVE MATERIAL, ACIDIC, COMBUSTIBLE

UN2530

Isobutyric anhydride is a colorless liquid. It is combustible and has a flash point of 139 deg. F. It is decomposed by water to isobutyric acid, which is water soluble with release of heat. It is corrosive to metals and skin.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

**ISOBUTYRONITRILE (FLAMMABLE LIQUID, N.O.S.)
FLAMMABLE LIQUID**

4909208

UN1993

Isobutyronitrile is a clear colorless liquid. It has a flash point of 47 deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

**ISONONANYL PEROXIDE, (TECHNICALLY PURE)(OR)
ISONONANYL PEROXIDE, (IN SOLUTION)**

4918174

ORGANIC PEROXIDE

UN2128

Isononanyl peroxide, (technically pure or) isononanyl peroxide, (in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**ISOCTANE
FLAMMABLE LIQUID**

**4908188
UN1262**

Isocane is a clear colorless liquid having a petroleum like odor. It has a flash point of 10 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

**ISOCTENE
FLAMMABLE LIQUID**

**4908189
UN1216**

Isocane is a clear colorless liquid having a petroleum-like odor. It has a flash point of less than 20 deg. F. It is lighter than water and insoluble in water. Its vapors are lighter than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

**ISOCTYL ALCOHOL, OTHER THAN PERFUMERY
GRADE (ALCOHOL, N.O.S.)
COMBUSTIBLE LIQUID**

4913128

UN1987

Isocetyl alcohol, other than perfumery grade, is a clear colorless liquid with a faint pleasant odor. It is used as a solvent, in the making of cutting and lubricating oils, in hydraulic fluids, and in the production of other chemicals. It has a flash point of 180 deg. f. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**ISOCTYL ALCOHOL, PERFUMERY GRADE
(ALCOHOL, N.O.S.)
COMBUSTIBLE LIQUID**

4913129

UN1987

Isocetyl alcohol, perfumery grade is a clear colorless liquid with a faint pleasant odor. It is used as an ingredient of cosmetics. It has flash point of 180 deg. f. It is lighter than water and is soluble in water. Its vapors are heavier than air

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**ISOPENTANE
FLAMMABLE LIQUID**

4908192

UN1265

Isopentane is a clear colorless liquid having a petroleum like odor. It has a flash point of -70 deg. F. a boiling point of 82 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

**ISOPENTANOIC ACID
CORROSIVE MATERIAL**

4931440
NA1760

Isopentanoic acid is a colorless liquid with a penetrating odor. It is slightly soluble in water. It is corrosive to metals and to tissue.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

**ISOPRENE
FLAMMABLE LIQUID
POLYMERIZABLE**

4907230
UN1218

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Isoprene is a clear colorless liquid with a petroleum-like odor. It has a flash point of -65 deg. F. and a boiling point of 93 deg. F. If it becomes contaminated or is subjected to heat, isoprene may polymerize. If the polymerization take place in a container, the container is subject to violent rupture. It is lighter than water and insoluble in water. Its vapors are heavier than air.

It weighs 5.7 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
- If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents

Apply "universal" gelling agent to immobilize spill

Environmental considerations—water spill

- Use natural barriers or oil spill control booms to limit spill motion
- Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material
- Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms
- Remove trapped material with suction hoses
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

**ISOPROPANOL
FLAMMABLE LIQUID**

4909205
UN1219

Isopropanol is a clear colorless liquid with a medicinal odor. It is used to make other chemicals, as a solvent, in pharmaceuticals (rubbing alcohol), and for many other uses. It has a flash point of 53 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

ISOPROPANOL AND METHANOL MIXTURE 4909206

(ALCOHOL, N.O.S.)
FLAMMABLE LIQUID UN1987

Isopropanol and methanol mixture is a clear colorless liquid. It has a flash point of 52-55 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

ISOPROPANOLAMINE 4963359
DODECYLBENZENESULFONATE

ORM-E NA9127
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Isopropanolamine dodecylbenzenesulfonate is a white to light yellow granular solid. It is used as a detergent. It is soluble in water. It will burn though it may require some effort to ignite.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

ISOPROPYL NITRATE 4907035
FLAMMABLE LIQUID UN1222
THERMALLY UNSTABLE

Isopropyl nitrate is a clear colorless liquid with a pleasant odor. It has a flash point between 32 and 73 deg. F. Prolonged exposure of the material to heat may result in the spontaneous decomposition of the material and this decomposition may reach explosive violence. Prolonged exposure of the containers of the material to fire or heat may result in the violent rupturing of the containers due to the decomposition of the material. It is heavier than water and insoluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
If material leaking (not on fire), downwind evacuation must be considered

ISOPROPYL ACETATE 4909210
FLAMMABLE LIQUID UN1220

Isopropyl acetate is a clear colorless liquid. It has a flash point of 40 deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

ISOPROPYL ACID PHOSPHATE, SOLID 4933335
CORROSIVE MATERIAL, ACIDIC UN1793

Isopropyl acid phosphate is a white crystalline solid. It is corrosive to metals and tissue.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

ISOPROPYL MERCAPTAN FLAMMABLE LIQUID

4908205
UN2703

Isopropyl mercaptan is a colorless liquid having a very strong disagreeable odor. It has a flash point of -30 deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

ISOPROPYL PERCARBONATE, STABILIZED ORGANIC PEROXIDE

4919550
NA2134

Isopropyl percarbonate is a white granular solid. It must be shipped in refrigerated containers by private or contract motor carriage. It is insoluble in water. Spontaneous decomposition at room temperature releases flammable and corrosive products. It will accelerate the burning of combustible materials.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts
Keep upwind
Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

ISOPROPYL PERCARBONATE, UNSTABILIZED ORGANIC PEROXIDE

4919551
NA2133

Isopropyl percarbonate, unstabilized is a white crystalline or granular solid. It must be shipped in refrigerated containers by private or contract motor carriage. It is insoluble in water. Spontaneous decomposition at room temperature releases flammable and corrosive products. It will accelerate the burning of combustible materials.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

ISOPROPYL PEROXYDICARBONATE, (NOT MORE THAN 52% IN SOLUTION) ORGANIC PEROXIDE

4919176
UN2134

Isopropyl peroxydicarbonate, (not more than 52% in solution) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

Continued on next page

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

ISOPROPYL PEROXYDICARBONATE, (TECHNICALLY PURE) 4919175

ORGANIC PEROXIDE UN2133

Isopropyl peroxydicarbonate, (technically pure) is a white solid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. It is easily ignited and burns with increasing rapidity as the fire progresses. It can form explosive mixtures with finely divided combustible materials. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

ISOPROPYLAMINE 4908194
FLAMMABLE LIQUIDS UN1221

Isopropylamine is a clear colorless liquid with an ammonia-like odor. It is used as a solvent and to make other chemicals. It has a flash point of -35 deg. F. and a boiling point of 90 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during the combustion of the material.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard

Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

ISOPROPYLTOLUENE (COMBUSTIBLE LIQUID, N.O.S.) 4913147

COMBUSTIBLE LIQUID NA1993

Isopropyltoluene is a clear colorless liquid with an aromatic odor. It has a flash point of 117 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

JET THRUST UNIT (JATO) 4902510
CLASS B EXPLOSIVE

Jet thrust unit (jato) is a metal cylinder containing a mixture of chemicals capable of burning rapidly. They are used to furnish auxiliary thrust in the launching of aircraft, missiles etc. The usual (jato) units contain solid propellant although units based on liquid propellants are also used. Under prolonged exposure to heat or fire these units may explode.

If material on fire or involved in fire

Dangerously explosive
Do not fight fires in a cargo of explosives
Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Avoid breathing dusts, and fumes from burning material
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

JET THRUST UNIT (JATO)

4901340

CLASS A EXPLOSIVE

Jet thrust unit (jato) consists of a metal cylinder containing propellant explosive capable of burning rapidly and producing considerable pressure. These units are designed to be ignited by an electric igniter.

If material on fire or involved in fire

Dangerously explosive
Do not fight fires in a cargo of explosives
Evacuate area and let burn

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Avoid breathing dusts, and fumes from burning material
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 5000 feet

KELTHANE (AGRICULTURAL INSECTICIDES, NEC, LIQUID)

4966930

ORM-E

NA2761

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Kelthane is a white crystalline solid dissolved in a liquid carrier. It is used as a pesticide. The carrier is water emulsifiable. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone; 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

KELTHANE (AGRICULTURAL INSECTICIDES, NEC, OTHER THAN LIQUID)

4966940

ORM-E

NA2761

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Kelthane is a white crystalline solid. It is used as a pesticide. It is a wettable powder. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone; 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

KELTHANE (INSECTICIDES, OTHER THAN AGRICULTURAL, NEC)

4966920

ORM-E

NA2761

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Kelthane is a white crystalline solid or the solid dissolved on a liquid carrier. It is used as a pesticide. It is a wettable powder or water emulsifiable liquid. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone; 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

KEPONE 4960140
ORM-E NA2761
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Kepone is a white solid. It is used as a pesticide. It is a wettable powder or water emulsifiable liquid. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
 (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
 Build dikes to contain flow as necessary

Personnel protection

Keep upwind
 Wear boots, protective gloves, and goggles
 Avoid breathing vapors or dusts
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
 Remove trapped material with suction hoses
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

KEROSENE 4915171
COMBUSTIBLE LIQUID UN1223

Kerosene is a clear colorless to light amber liquid with a petroleum odor. It has a flash point of 100 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may spread fire
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

KITS, PNEUMATIC TIRE CLEANING, AUTO 4915484
(COMBUSTIBLE LIQUID, N.O.S.)
COMBUSTIBLE LIQUID NA1993

Kits, pneumatic tire cleaning, auto is a material containing a solvent having a closed cup flash point between 100 and 199 deg. F. The hazard of this material is combustibility.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical
If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

KITS, PNEUMATIC TIRE CLEANING, AUTO 4910484
(FLAMMABLE LIQUID, N.O.S.)
FLAMMABLE LIQUID UN1993

Kits, pneumatic tire cleaning, auto is a material containing a solvent having a closed cup flash point of less than 100 deg. F. The hazard of this material is flammability.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

LACQUER BASE DRY 4917323
FLAMMABLE SOLID NA2557

Lacquer base dry is the solid material used in making lacquers (paint). Because the material contains nitrocellulose, it is very flammable and easily ignited. Toxic oxides of nitrogen are produced during combustion.

If material on fire or involved in fire

Use water in flooding quantities as fog
 Use "alcohol" foam, carbon dioxide or dry chemical
 Cool all affected containers with flooding quantities of water

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Wear self-contained breathing apparatus when fighting fires involving this material

LACQUER BASE OR LACQUER CHIPS, PLASTIC 4910217
(WET WITH ALCOHOL OR SOLVENT)
FLAMMABLE LIQUID NA1263

Lacquer base or lacquer chips, plastic contain a flammable solvent. Its flash point is 100 deg. F. or lower. The hazard is flammability.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**LACQUER CHIPS, DRY
FLAMMABLE SOLID**

**4917324
NA2557**

Lacquer chips, dry is the solid material used in making lacquers (paint). Because the material contains nitrocellulose it is very flammable and easily ignited. Toxic oxides of nitrogen are produced during combustion.

If material on fire or involved in fire

Use water in flooding quantities as fog
Use "alcohol" foam, carbon dioxide or dry chemical
Cool all affected containers with flooding quantities of water

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Personnel protection

Wear self-contained breathing apparatus when fighting fires involving this material

**LACQUER THINNING COMPOUNDS, USED
(COMPOUND, LACQUER, THINNING)
FLAMMABLE LIQUID**

**4910486
NA1142**

Lacquer thinning compounds used are generally clear colorless liquids. The flash point is below 100 deg. F. Most of these compounds are lighter than water and only partially soluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**LACQUER THINNING COMPOUNDS, USED
(COMPOUND, LACQUER, THINNING)
COMBUSTIBLE LIQUID**

**4915486
NA1142**

Lacquer thinning compounds used are generally clear colorless liquids. The flash point is between 100 and 199 deg. F. Most of these compounds are lighter than water and only partially soluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**LACTIC ACID (HYDROXYPROPIONIC ACID) (ACID,
LIQUID, N.O.S.)**

4931757

CORROSIVE MATERIAL, ACIDIC, COMBUSTIBLE

NA1760

Lactic acid is a colorless to yellow syrupy liquid and is odorless. It is used to make cultured dairy products, as a food preservative, and to make chemicals. It is soluble in water, it is corrosive to metals and tissue.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors
Vapor knockdown water is corrosive or toxic and should be diked for containment

**LAUROYL PEROXIDE
ORGANIC PEROXIDE**

**4919560
UN2124**

Lauroyl peroxide is a coarse white powder. It is shipped either dry or 30 percent water wet. Dry, the material is easily ignited and burns with increasing rapidity as the fire progresses, though not as vigorously as some other peroxides. Dry or wet it supports the burning of combustible materials. Under prolonged exposure to heat or fire containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing vapors or dusts
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**LAUROYL PEROXIDE, (NOT MORE THAN
42% STABLE DISPERSION, IN WATER)
ORGANIC PEROXIDE**

**4919187
UN2893**

Lauroyl peroxide, (not more than 42% stable dispersion, in water) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

**LEAD ACETATE
ORM-E**

**4966640
UN1616**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Lead acetate is a white crystalline solid. It is used to make other lead compounds, in chemical analysis, as an insecticide, and for many other uses. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Adjust pH to neutral (pH-7)
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**LEAD ARSENATE AND SULPHUR, DRY (LEAD
ARSENATE, SOLID)**

4923318

POISON B

UN1617

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Lead arsenate and sulphur, dry is a yellow white to yellow powder. It is insoluble in water. It is toxic by inhalation and ingestion.

Lead arsenate and sulphur, dry (lead arsenate, solid) na2020

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
 Add ferric chloride (fcl3)
 Adjust ph to neutral (ph-7)
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

LEAD ARSENATE, SOLID 4923235
POISON B UN1617
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Lead arsenate, solid is a white powder. It is insoluble in water. It is toxic by skin absorption, inhalation (dust) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
 (Material itself does not burn or burns with difficulty.)
 Use water in flooding quantities as fog
 Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
 Keep upwind
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
 Add ferric chloride (fcl3)
 Adjust ph to neutral (ph-7)
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

LEAD ARSENATE, SOLID (LEAD ARSENATE, PASTE) 4923234
POISON B UN1617
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Lead arsenate, paste is the white powder mixed with water to form a thick slurry. It is insoluble in water. The dried material is toxic by skin absorption, inhalation (powder) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
 (Material itself does not burn or burns with difficulty.)
 Use water in flooding quantities as fog
 Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
 Keep upwind
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
 Add ferric chloride (fcl3)
 Adjust ph to neutral (ph-7)
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

LEAD ARSENITE, SOLID 4923236
POISON B UN1618

Lead arsenite, solid is a white powder. It is insoluble in water. It is toxic by inhalation (dust) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
 (Material itself does not burn or burns with difficulty.)
 Use water in flooding quantities as fog
 Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
 Keep upwind
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

LEAD BAGHOUSE FLUE DUST (FLUE DUST, POISONOUS) 4923361
POISON B NA2811

Lead baghouse flue dust is a greyish black powder. It is insoluble in water. It is toxic by inhalation (dust, etc.) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
 (Material itself does not burn or burns with difficulty.)
 Use water in flooding quantities as fog
 Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
 Keep upwind
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

LEAD CHLORIDE 4944130
ORM-B NA2291
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Lead chloride is a white crystalline solid. It is used to make other lead compounds and in analytical chemistry. It is insoluble in cold water and is soluble in hot water. It is non-combustible. It is corrosive to aluminum.

Continued on next page

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with
copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire
fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone,
or sodium bicarbonate
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of
pollutants and precipitates

**LEAD CYANIDE
POISON B**

4923447
UN1620

Lead cyanide is a white to yellowish powder. It is slightly soluble in
water and is gradually decomposed by water and very rapidly decom-
posed by acids to give off hydrogen cyanide, a flammable poison gas.
It is toxic by skin absorption through open wounds, by ingestion, and
by inhalation of dusts or hydrogen cyanide decomposition of the material.
Toxic oxides of nitrogen are produced in fires involving this material.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use foam, carbon dioxide or dry chemical
Do not use water on material itself
If large quantities of combustibles are involved, use water in flooding
quantities as spray and fog
Use water spray to absorb vapors

If material not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Use water spray to knock-down vapors
Keep material dry

Personnel protection

Avoid breathing vapors or dusts
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with
copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involv-
ing this material
If contact with the material anticipated, wear full protective clothing

**LEAD FLUE DUST (FLUE DUST, POISONOUS)
POISON B**

4923360
NA2811

Lead flue dust is a greyish black powder. It is insoluble in water. It is
toxic by inhalation (dust, etc.) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with
copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involv-
ing this material
If contact with the material anticipated, wear full protective clothing

**LEAD FLUOBORATE
ORM-B**

4944133
NA2291

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Lead fluoborate is a colorless crystalline solid. It is used in metal
plating and finishing. It is corrosive to aluminum.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use foam, carbon dioxide or dry chemical
Do not use water on material itself
If large quantities of combustibles are involved, use water in flooding
quantities as spray and fog

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with
copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involv-
ing this material
If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire
fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone,
or sodium bicarbonate
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of
pollutants and precipitates

**LEAD FLUORIDE
ORM-B**

4944140
NA2811

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Lead fluoride is a white crystalline solid. It is used in electronics and
to make optical glasses. It is insoluble in water. It is non-combustible.
It is corrosive to aluminum.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with
copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

LEAD IODIDE

4966950

ORM-E

NA2811

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Lead iodide is a yellow crystalline solid. It is used in printing and photography, to seed clouds and other uses. It is insoluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

LEAD NITRATE

4918726

OXIDIZER

UN1469

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Lead nitrate is a white crystalline solid. The material is soluble in water. It is non-combustible but it will accelerate the burning of combustible materials. If large quantities of the material are involved in the fire an explosion may result. Prolonged exposure of the material to fire or heat may result in an explosion. Toxic oxides of nitrogen are produced in fires involving this material.

If material on fire or involved in fire

Flood with water
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 2500 feet

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

LEAD PEROXIDE, GROUND, DRY (LEAD PEROXIDE OXIDIZER)

4918779

UN1872

Lead peroxide, ground, dry is a brown granular or powdered material. It is insoluble in water. It is non-combustible but it will accelerate the burning of combustible material.

If material involved in fire

Flood with water

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

LEAD PEROXIDE, PASTE (LEAD PEROXIDE OXIDIZER)

4918780

UN1872

Lead peroxide, paste is a brown dough-like material. The usual liquid in the paste is water or acetic acid. It is insoluble in water. Lead peroxide itself is non combustible but it will accelerate the burning of combustible materials.

If material involved in fire

Flood with water

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

LEAD STEARATE

4966960

ORM-E

NA2811

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Lead stearate is a white powder. It is used as a corrosion inhibitor, as a dryer for paints, and for many other uses. It is slightly soluble in water. It will burn though it may take some effort to ignite.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Continued on next page

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire
fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

LEAD SULFATE, SOLID (CONTAINING MORE THAN 3% FREE ACID) 4930237**CORROSIVE MATERIAL, ACIDIC UN1794
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)**

Lead sulfate, solid (containing more than 3% free acid is a white wet-looking solid. The lead sulfate itself is insoluble in water. The sulfuric acid is soluble in water. The material is corrosive to metals and tissue.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

**LEAD SULFIDE 4966987
ORM-E NA2291****ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)**

Lead sulfide is a silvery metallic crystalline solid or black powder. It is used to make ceramics, in the electronic industry, and for other uses. It is insoluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**LEAD SULPHATE, CRUDE (LEAD SULFATE) 4966970
ORM-E UN1794****ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)**

Lead sulphate, crude is a white to grey crystalline solid. Refined it is used to make storage batteries, and as in certain paints as a pigment. It is slightly soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**LEAD SULPHATE, REFINED (LEAD SULFATE) 4966980
ORM-E UN1794****ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)**

Lead sulphate, refined is a white crystalline solid. It is used to make storage batteries and as a pigment in specialized paints. It is slightly soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**LEAD THIOCYANATE
ORM-E****4966256
NA2291****ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)**

Lead thiocyanate is a white to yellow crystalline solid. It is used to make explosives, safety matches, and in dyeing. It is slightly soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**LEATHER BLEACH
FLAMMABLE LIQUID****4910222
NA1142**

Leather bleach is a commercial preparation which may contain a flammable solvent which has a flash point of less than 100 deg. F. The hazard is flammability.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**LEATHER BLEACH
COMBUSTIBLE LIQUID****4915222
NA1142**

Leather bleach is a commercial preparation which may contain a solvent having a flash point between 100 and 199 deg. F. The hazard is combustibility.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**LEATHER DRESSING
FLAMMABLE LIQUID****4910223
NA1142**

Leather dressing is a commercial preparation which may contain a flammable solvent. In this case the hazard is the flammability of the solvent.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**LEATHER DRESSING
COMBUSTIBLE LIQUID****4915223
NA1142**

Leather dressing is a commercial preparation which may contain a solvent having a flash point between 100 and 199 deg. F. The hazard is combustibility.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

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Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

LEWISITE (POISONOUS LIQUID, N.O.S.)**4920517****POISON A****NA9035**

Lewisite is a colorless liquid with a geranium-like odor. It is colorless when pure but impurities will have the color ranging from brown to violet. It is toxic by inhalation and skin absorption. Contact with the skin will also cause severe burns. At concentrations below that at which one can detect the material by smell, it is irritating to the eyes and mucous membranes. It is slowly decomposed by water. It may only be shipped in cylinders. Prolonged exposure of the cylinders to fire or heat may result in the violent rupturing and rocketing of the cylinders.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If material leaking (not on fire), downwind evacuation must be considered

LIGHTER FLUID**4910125****FLAMMABLE LIQUID****UN1226**

Lighter fluid is a clear colorless liquid with a petroleum like odor. It has a flash point of less than 100 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

LIGNITE ASH, URANIUM BEARING (RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY, (OR), LSA, N.O.S.)**4926438****RADIOACTIVE MATERIAL****UN2912**

Lignite ash, uranium bearing, is a greyish to light tan colored solid. Radioactive materials emit certain rays that may be hazardous. These rays can be detected only by instruments. Exposure of humans to intense radiation may be harmful, whereas film may be damaged by radiation from relatively low concentrations.

If material involved in fire

Contact the local, state, or department of energy radiological response team
Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not involved in fire

Contact the local, state, or department of energy radiological response team
Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Keep upwind
Avoid breathing fumes from burning material
Wear full protective clothing
Wear self-contained breathing apparatus
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

LIME SALTS, NEC (CORROSIVE SOLID, N.O.S.)**4935255****CORROSIVE MATERIAL, BASIC****UN1759**

Lime salts, nec are various calcium containing compounds having the property of being corrosive to either metals and/or tissue.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

LINDANE (AGRICULTURAL INSECTICIDES, NEC, LIQUID)**4941151****ORM-A****NA2761****ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)**

Lindane is a white to yellow liquid dissolved in a liquid carrier. It is used as a pesticide. It is a water emulsifiable liquid. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

- Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- Use natural barriers or oil spill control booms to limit spill motion
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**LINDANE (AGRICULTURAL INSECTICIDES, NEC,
OTHER THAN LIQUID)** 4941152

**ORM-A NA2761
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)**

Lindane is a white to yellow solid. It is used as a pesticide. It is a wettable powder. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- Remove trapped material with suction hoses
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

**LINDANE (INSECTICIDES, OTHER THAN
AGRICULTURAL, NEC)** 4941150

**ORM-A NA2761
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)**

Lindane is a white to yellow solid or the solid dissolved in a liquid carrier. It is used as a pesticide. It is a wettable powder or water emulsifiable liquid. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

**LIQUEFIED NONFLAMMABLE GASES (CHARGED
WITH NITROGEN, CARBON DIOXIDE, OR AIR)** 4904840
NONFLAMMABLE GAS NA1058

Liquefied nonflammable gases are liquids other than those classified as flammable, corrosive or poisonous which are charged with nitrogen, carbon dioxide, or air for the purpose of expelling the liquid from the container. In the case of aerosols the violent rupture and rocketing of the container is possible if the container is exposed to fire or heat.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Attempt to stop leak if without hazard

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment

LIQUEFIED PETROLEUM GAS 4905752
FLAMMABLE GAS UN1075

Liquefied petroleum gas is a colorless gas with a faint petroleum like odor shipped as a liquid under its vapor pressure. For transportation it may be stenched. Contact with the liquid can cause frostbite. It is easily ignited. Its vapor is heavier than air and a flame can flash back to the source of leak very easily. This leak may be either a liquid or vapor leak. It can asphyxiate by the displacement of air. Under fire conditions the cylinders can rupture and rocket.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Continued on next page

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
- If material leaking (not on fire), downwind evacuation must be considered

LIQUEFIED PETROLEUM GAS (PINTSCH GAS) 4905780
FLAMMABLE GAS UN1075

Pintsch gas is a colorless gas with a petroleum-like odor. It is shipped as a liquefied gas under its vapor pressure. For transportation it may be stenciled. Contact with the liquid can cause frostbite. It is easily ignited. Its vapor is heavier than air and a flame can flash back to the source of leak very easily. This leak can be either a liquid or vapor leak. It can asphyxiate by the displacement of air. Under fire conditions the cylinders or tank cars may violently rupture and rocket.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
- If material leaking (not on fire), downwind evacuation must be considered

LIQUORS, ALCOHOLIC, NEC (ALCOHOLIC 4910225
BEVERAGE)

FLAMMABLE LIQUID UN1170

Alcoholic liquors are beverages containing alcohol. They have sufficient alcohol in them for the flash point to be below 100 deg. F. They are about the same density as water and soluble in water. The alcohol vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

LIQUORS, ALCOHOLIC, NEC (ALCOHOLIC 4915225
BEVERAGE)

COMBUSTIBLE LIQUID UN1170

Alcoholic liquors are beverages containing alcohol. They have sufficient alcohol in them for the flash point to be between 100 and 199 deg. F. They are about the same density as water and soluble in water. The alcohol vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

LITHIUM ACETYLIDE-ETHYLENE DIAMINE COMPLEX 4916415
FLAMMABLE SOLID NA2813

Lithium acetylide-ethylene diamine complex is a crystalline solid. It can absorb moisture from the air and spontaneously heat and ignite. It reacts with water to form lithium hydroxide, a corrosive material, and acetylene, a flammable gas. The heat of this reaction may be sufficient to ignite the acetylene.

If material on fire or involved in fire

- Do not use water
- Use graphite, soda ash, powdered sodium chloride, or suitable dry powder

If material not on fire and not involved in fire

- Do not use water
- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep material dry

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Approach fire with caution
- Wear self-contained breathing apparatus when fighting fires involving this material

**LITHIUM ALUMINUM HYDRIDE
FLAMMABLE SOLID
WATER REACTIVE**

**4916420
UN1410**

Lithium aluminum hydride is a light greyish white powder. It is used to make other chemicals, as a polymerization catalyst, as a hydrogen source, and as a propellant. If spread out over a large flat combustible surface friction may be sufficient to cause ignition. It reacts with water to form lithium hydroxide, a corrosive material, aluminum hydroxide and hydrogen, a flammable gas. The heat of this reaction may be sufficient to ignite the hydrogen. The lithium and aluminum hydroxides are corrosive. It may react violently with heat or oxidizing materials.

If material on fire or involved in fire

Do not use water
Use graphite, soda ash, powdered sodium chloride, or suitable dry powder

If material not on fire and not involved in fire

Do not use water
Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep material dry
Do not attempt to sweep up dry material

Personnel protection

Avoid breathing dusts, and fumes from burning material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**LITHIUM ALUMINUM HYDRIDE, ETHERAL
FLAMMABLE LIQUID**

**4908215
UN1411**

Lithium aluminum hydride, ethereal is the solution of lithium aluminum hydride in an ether solvent. It is used to make other chemicals, and as a catalyst in making plastics. It has a flash point of less than 20 deg. F. It reacts with water giving off hydrogen, a flammable gas. The heat of this reaction may be sufficient to ignite the hydrogen. It can react violently if in contact with oxidizers. If the solvent evaporates the solid remaining is a white powder. If subject to very light friction, a fire is very likely to result. The solvent vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Do not use water
Use "alcohol" foam, carbon dioxide or dry chemical
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Do not use water
Do not attempt to sweep up dry material

Personnel protection

Avoid breathing fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

**LITHIUM AMIDE, POWDERED
FLAMMABLE SOLID**

**4916722
UN1412**

Lithium amide is a white to greyish crystalline solid with an ammonia-like odor. It is used to make other chemicals. It reacts with water to form lithium hydroxide a corrosive material, and ammonia, a nonflammable gas. The heat from this decomposition may be sufficient to ignite surrounding combustible materials.

If material on fire or involved in fire

Do not use water
Use graphite, soda ash or powdered sodium chloride

If material not on fire and not involved in fire

Do not use water
Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep material dry

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

**LITHIUM BOROHYDRIDE
FLAMMABLE SOLID
WATER REACTIVE**

**4916421
UN1413**

Lithium borohydride is a white to greyish crystalline powder. It is decomposed by water to form lithium hydroxide, a corrosive material, and hydrogen, a flammable gas. The heat of this reaction may be sufficient to ignite the hydrogen. The material itself is easily ignited and burns vigorously once ignited.

If material on fire or involved in fire

Do not use water
Use graphite, soda ash, powdered sodium chloride, or suitable dry powder

If material not on fire and not involved in fire

Do not use water
Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep material dry
Do not attempt to sweep up dry material

Personnel protection

Avoid breathing dusts, and fumes from burning material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**LITHIUM CHROMATE
ORM-E**

**4963720
NA9134**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Lithium chromate is a yellow crystalline solid. It is used as a corrosion inhibitor and in the manufacture of other chemicals. It is soluble in water. It is non-combustible.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Continued on next page

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- Neutralize with agricultural lime (slaked lime), crushed limestone, or sodium bicarbonate
- Add soda ash
- Adjust pH to neutral (pH-7)
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**LITHIUM FERRO SILICON
FLAMMABLE SOLID
WATER REACTIVE****4916422
UN2830**

Lithium ferro silicon is in the form of crystalline metallic lumps or powder. It reacts with water to form lithium hydroxide, a corrosive material and hydrogen, a flammable gas. The heat of the reaction may be sufficient to ignite the hydrogen.

If material on fire or involved in fire

- Do not use water
- Do not use carbon dioxide
- Use suitable dry powder
- Use dry chemical or carbon dioxide

If material not on fire and not involved in fire

- Do not use water
- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep material dry

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**LITHIUM HYDRIDE
FLAMMABLE SOLID
WATER REACTIVE****4916424
UN1414**

Lithium hydride is a greyish white granular powder. It reacts with water to form lithium hydroxide, a corrosive material, and hydrogen, a flammable gas. The heat of this reaction may be sufficient to ignite the hydrogen. It may react violently with heat or oxidizing materials.

If material on fire or involved in fire

- Do not use water
- Do not use dry chemical or carbon dioxide
- Use graphite, soda ash or powdered sodium chloride

If material not on fire and not involved in fire

- Do not use water
- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep material dry

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**LITHIUM HYDRIDE IN FUSED SOLID FORM
FLAMMABLE SOLID
WATER REACTIVE****4916425
UN2805**

Lithium hydride in fused solid form exists as greyish white lumps. It is used to make other chemicals, as a hydrogen source, and for other uses. It reacts with water to form lithium hydroxide, a corrosive material and hydrogen a flammable gas. The heat from this decomposition may be sufficient to ignite the hydrogen. It may react violently with heat or oxidizing materials.

If material on fire or involved in fire

- Do not use water
- Do not use dry chemical or carbon dioxide
- Use graphite, soda ash or powdered sodium chloride

If material not on fire and not involved in fire

- Do not use water
- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep material dry

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**LITHIUM HYPOCHLORITE COMPOUND, DRY
CONTAINING MORE THAN 39 PERCENT
AVAILABLE CHLORINE****4918727****OXIDIZER****UN1471**

Lithium hypochlorite compound, dry is a white granular solid or tablets compressed from the granules with an odor of chlorine. It is used as a dry bleach. It is noncombustible but it will accelerate the burning of combustible material. It is decomposed by water with the evolution of chlorine gas and heat. Prolonged exposure of the material to fire or heat may result in the vigorous decomposition of the material and the rupture of its container. Material containing less than 39 percent available chlorine will undergo reactions described above though it may take longer to initiate and the resulting reactions may not be as vigorous.

If material on fire or involved in fire

- Flood with water
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 2500 feet

**LITHIUM METAL
FLAMMABLE SOLID
WATER REACTIVE****4916428
UN1415**

Lithium metal is a soft silvery metal though normally greyish white due to oxide formation. It reacts with water to form lithium hydroxide a corrosive material, and hydrogen a flammable gas. The heat of this reaction may be sufficient to ignite the hydrogen. If lithium metal is heated to its melting point, spontaneous ignition is likely.

If material on fire or involved in fire

- Do not use water
- Do not use carbon dioxide
- Use graphite, soda ash, powdered sodium chloride, or suitable dry powder

If material not on fire and not involved in fire

- Do not use water
- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep material dry

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**LITHIUM METAL, IN CARTRIDGES
FLAMMABLE SOLID
WATER REACTIVE**

4916429
UN1415

Lithium metal in cartridges is a very limited quantity of the soft silvery metal sealed in a copper tube overpacked in a wooden box. Lithium reacts with water to form lithium hydroxide, a corrosive material and hydrogen a flammable gas. The heat of this reaction may be sufficient to ignite the hydrogen.

If material on fire or involved in fire

- Do not use water
- Do not use carbon dioxide
- Use graphite, soda ash, powdered sodium chloride, or suitable dry powder

If material not on fire and not involved in fire

- Do not use water
- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep material dry

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**LITHIUM NITRIDE
FLAMMABLE SOLID
WATER REACTIVE**

4916432
UN2806

Lithium nitride is a reddish brown powder. It is used in metallurgy, and to make other chemicals. It is easily ignited and burns slowly with intense heat. Moisture intensifies the fire. It reacts with water to form lithium hydroxide, a corrosive material and ammonia, a nonflammable gas. The heat of the reaction may be sufficient to ignite nearby combustible materials or the material itself.

If material on fire or involved in fire

- Do not use water
- Do not use dry chemical or carbon dioxide
- Use graphite, soda ash or powdered sodium chloride

If material not on fire and not involved in fire

- Do not use water
- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep material dry

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**LITHIUM PEROXIDE
OXIDIZER, CORROSIVE**

4918520
UN1472

Lithium peroxide is a white to light yellow granular solid. It is soluble in water. Contaminants can cause the solution to decompose to a lithium hydroxide solution which is corrosive. The material itself is non-combustible but it accelerates the burning of combustible material. Prolonged exposure of the material and/or its containers to fire or heat may result in a vigorous chemical reaction and the resulting rupture of the containers.

If material on fire or involved in fire

- Use suitable dry powder

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 1500 feet

**LITHIUM SILICON
FLAMMABLE SOLID
WATER REACTIVE**

4916431
UN1417

Lithium silicon is a black, lustrous powder to lump material with a sharp irritating odor. It reacts with water to form lithium hydroxide a corrosive material and hydrogen, a flammable gas. The heat of this reaction may be sufficient to ignite the hydrogen.

If material on fire or involved in fire

- Do not use water
- Do not use carbon dioxide
- Use graphite, soda ash, powdered sodium chloride, or suitable dry powder

If material not on fire and not involved in fire

- Do not use water
- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep material dry

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**LONDON PURPLE, SOLID
POISON B**

4923237
UN1621

London purple, solid consists of a mixture of arsenic trioxide, aniline, lime and ferrous oxide. It is insoluble in water. It is toxic by inhalation (dust, etc.) and by ingestion.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Continued on next page

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

LOW EXPLOSIVE CLASS A EXPLOSIVE

4901705

Low explosive is a solid material which can be made to burn very vigorously by means of a spark or flame. Upon prolonged exposure to fire containers of the material can explode.

If material on fire or involved in fire

- Dangerously explosive
- Do not fight fires in a cargo of explosives
- Evacuate area and let burn

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep spilled material wet
- Wet spilled material before picking it up
- Do not attempt to sweep up dry material

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 5000 feet

LUBRICATING OIL, NEC (COMBUSTIBLE LIQUID, N.O.S.)

4915229

COMBUSTIBLE LIQUID

NA1993

Lubricating oil, nec, is a variable colored liquid with a petroleum-like odor. It has a flash point between 100 and 200 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

LUBRICATING SYSTEM SIGHT FEED FLUID (COMBUSTIBLE LIQUID, N.O.S.)

4915228

COMBUSTIBLE LIQUID

NA1993

Lubricating system sight feed fluid is a variable colored liquid with a petroleum-like odor. It has a flash point between 100 and 200 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

LUTIDENE (FLAMMABLE LIQUID, N.O.S.) FLAMMABLE LIQUID

4909181

UN1993

Lutidene is a colorless liquid having a peppermint odor. It is used to make other chemicals. It has a flash point of 92 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

LYE, CONCENTRATED, NEC (SODIUM HYDROXIDE, DRY, SOLID, FLAKE, BEAD OR GRANULAR)

4935262

CORROSIVE MATERIAL, BASIC

UN1823

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Lye, concentrated, nec is a white solid. It is soluble in water with release of heat. It absorbs moisture from the air and dissolves in it. It is corrosive to metals and tissue.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Neutralize with dilute acid or removable strong acid

MAGNESIUM ALUMINUM PHOSPHIDE

4915440

FLAMMABLE SOLID

UN1419

WATER REACTIVE

Magnesium aluminum phosphide is a crystalline or a grey lump solid. It reacts with water to form magnesium and aluminum hydroxides and phosphine a flammable poisonous gas. Phosphine will normally ignite spontaneously in contact with air.

If material on fire or involved in fire

Do not use water

Use dry chemical or carbon dioxide

If material not on fire and not involved in fire

Do not use water

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Keep material dry

Personnel protection

Avoid breathing dusts, and fumes from burning material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

MAGNESIUM ARSENATE, SOLID

4923238

POISON B

UN1622

Magnesium arsenate, solid is a white powder. It is insoluble in water. It is toxic by inhalation (dust, etc.) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

MAGNESIUM NITRATE

4918728

OXIDIZER

UN1474

Magnesium nitrate is a white crystalline solid. It is used in pyrotechnics. It absorbs moisture from the air and dissolves in it. The material is soluble in water. It is noncombustible but it will accelerate the burning of combustible materials. If large quantities of the material are involved in the fire or the combustible material is finely divided an explosion may result. Prolonged exposure of the material to fire or heat may result in an explosion. Toxic oxides of nitrogen are produced in fires involving this material.

If material on fire or involved in fire

Flood with water

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 2500 feet

MAGNESIUM PERCHLORATE

4918729

OXIDIZER

UN1475

Magnesium perchlorate is a white crystalline solid. It is used as a drying agent and as an oxidizing agent. It strongly absorbs water from air and dissolves in it. The material is soluble in water. It is noncombustible but it will accelerate the burning of combustible materials. If large quantities of the material are involved in the fire or the combustible material is finely divided an explosion may result. Prolonged exposure of the material to fire or heat may result in an explosion.

If material on fire or involved in fire

Flood with water

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 2500 feet

MAGNESIUM PEROXIDE, SOLID

4918730

OXIDIZER

UN1476

Magnesium peroxide is a white powder. It is used in medicine, and as a bleaching agent. It is insoluble in water and slowly decomposed by water. It is noncombustible but it will accelerate the burning of combustible material, if the combustible material is finely divided the mixture may be explosive. Mixtures of combustible material and the peroxide can be ignited by friction or contact with moisture.

If material on fire or involved in fire

Flood with water

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

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If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 2500 feet

MAGNESIUM SCRAP (BORINGS, CLIPPINGS, SHAVINGS, SHEET, TURNINGS, OR SCALPINGS) 4916435
FLAMMABLE SOLID NA1869
WATER REACTIVE

Magnesium scrap is a silvery colored metal. The more finely divided forms react with water to liberate hydrogen, a flammable gas, though not as vigorously as lithium or sodium. The thinner pieces are easily ignited and burn with an intense white flame.

If material on fire or involved in fire

- Do not use water
- Use graphite, soda ash, powdered sodium chloride, or suitable dry powder

If material not on fire and not involved in fire

- Do not use water
- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep material dry

Personnel protection

- Wear boots, protective gloves, and goggles

MAGNESIUM, METAL (POWDERED, PELLETS, TURNINGS OR RIBBONS) 4916435
FLAMMABLE SOLID UN1869
WATER REACTIVE

Magnesium, metal (powdered, pellets, turnings, or ribbons) is a light silvery colored metal. The more finely divided material reacts with water to liberate hydrogen, a flammable gas, though this reaction is not as vigorous as that of sodium or lithium with water. In finely divided forms it is easily ignited and burns with an intense white flame.

If material on fire or involved in fire

- Do not use water
- Use graphite, soda ash, powdered sodium chloride, or suitable dry powder

If material not on fire and not involved in fire

- Do not use water
- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep material dry
- Do not attempt to sweep up dry material

Personnel protection

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

MALATHION

ORM-A

4941156

NA2783

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)

Malathion is a yellow liquid. It is used as an insecticide. It is combustible though it may take some effort to ignite. It is slightly soluble in water. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

It weighs 10.3 pounds per gallon.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Keep upwind
- Wear boots, protective gloves, and goggles
- Avoid breathing vapors or dusts
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Remove trapped material with suction hoses
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

MALEIC ACID

ORM-A

4941155

NA2215

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Maleic acid is a colorless crystalline solid having a faint odor. It is used to make other chemicals and for dyeing and finishing naturally occurring fibers. It is combustible though it may take some effort to ignite. It is soluble in water.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors or dusts
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

MALEIC ANHYDRIDE 4941161
ORM-A UN2215
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Maleic anhydride is a colorless crystalline solid. It is used to make paints and plastics and other chemicals. It is combustible though it may take some effort to ignite. It is slowly decomposed by water to give maleic acid, another orm-a.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors or dusts
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

MANGANESE RESINATE, (FLAMMABLE SOLID, N.O.S.) 4916766
FLAMMABLE SOLID UN1325

Manganese resinate ranges from a dark brown-black solid mass to a light tan powder. It may spontaneously heat in the presence of air or moisture. This heat may be sufficient to ignite surrounding combustible materials. It is insoluble in water.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

MATCHES, SAFETY (BOOK, CARD OR STRIKE ON BOX) 4917356
FLAMMABLE SOLID UN1944

Matches, safety are strips of cardboard held together as an assembly, or wooden sticks having their ends dipped with a pyrotechnic mixture and requiring a specially treated surface for striking to cause ignition.

If material on fire or involved in fire

- Flood with water
- If material not on fire and not involved in fire**
- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Avoid breathing fumes from burning material

MATCHES, STRIKE ANYWHERE 4917336
FLAMMABLE SOLID UN1331

Matches, strike anywhere are wooden sticks with an end coated with a pyrotechnic composition that may be ignited by friction with almost any dry surface. Fires occurring in packages of these matches caused by internal friction between the matches or impact are usually contained in the package if it is not broken. If the matches have gotten wet and dried out they are more readily ignited.

If material on fire or involved in fire

- Flood with water

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away

Personnel protection

- Avoid breathing fumes from burning material

MEDICINES, N.O.S. 4917378
FLAMMABLE SOLID NA1325

Medicines, n.o.s. is the proper shipping name of any solid material, other than one classed as an explosive, or specifically listed by name in the list of hazardous materials which is liable under conditions incident to transportation to cause fires through friction, absorption of moisture, spontaneous chemical changes as a result of retained heat from the manufacturing or processing of the solid, or which can be readily ignited by external sparks or flame and when so ignited burns vigorously and persistently. Try to ascertain the exact name of the material.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of fire

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

MEDICINES, N.O.S. 4918412
OXIDIZER NA1479

Medicines, n.o.s. are various materials which have the property of accelerating the burning of combustible material. These materials may not burn by themselves. Prolonged exposure of these materials and/or their containers to fire or heat may result in an explosion. These materials may only be shipped in containers of 55 gallon capacity or less.

If material on fire or involved in fire

- Flood with water
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable—evacuate for a radius of 1500 feet

**MEDICINES, N.O.S.
FLAMMABLE LIQUID**

**4910193
NA1993**

Medicines, n.o.s. are those medicines with the property of having a flash point of less than 100 deg. F. They are generally lighter than water and soluble in water. Their vapors are heavier than air

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**MEDICINES, N.O.S.
COMBUSTIBLE LIQUID**

**4915193
UN1851**

Medicines, n.o.s. are those medicines with the property of having a flash point between 100 and 199 deg. F. They are generally lighter than water and soluble in water. Their vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

**MEDICINES, N.O.S. (LIQUID)
POISON B**

**4921426
NA2810**

Medicines, n.o.s. (liquid) are liquids or a solid dissolved in a liquid having the property of being toxic by ingestion, inhalation, or skin absorption. The liquid or solution may or may not burn depending on the nature of the material and/or the solvent of the solution.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective

- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- If material not on fire and not involved in fire**
- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If material leaking (not on fire), downwind evacuation must be considered

**MEDICINES, N.O.S. (SOLID)
POISON B**

**4921491
NA2811**

Medicines, n.o.s. (solid) are pure materials or mixtures of two or more solids or a liquid absorbed on a dry carrier. It has the property of being toxic by ingestion, inhalation (vapor dust, etc) or skin absorption.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

**MEDICINES, N.O.S., LIQUID
CORROSIVE MATERIAL**

**4936583
UN1851**

Medicines, n.o.s., liquid is the proper shipping name for various liquids having the property of being corrosive to steel or tissue. It may either be a simple liquid material or a solid dissolved in a solvent. It may be combustible though requiring some effort to ignite. They may or may not be water soluble.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical
- If material not on fire and not involved in fire**
- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

MEDICINES, N.O.S., SOLID CORROSIVE MATERIAL

4936584
UN1851

Medicines, n.o.s., solid is the proper shipping name for various colored solids having the property of being corrosive to tissue. They may or may not be water soluble.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use dry chemical, carbon dioxide, or dry sand
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

MEMTETRAHYDROPHthalic ANHYDRIDE CORROSIVE MATERIAL

4931441
NA1760

Memtetrahydrophthalic anhydride is a colorless to light yellow liquid. It is used to make plastics. It is soluble in water and decomposed by water to tetrahydrophthalic acid, which is also water soluble, with release of heat. It is corrosive to skin.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

MERCAPTAN MIXTURE, ALIPHATIC COMBUSTIBLE LIQUID

4913120
NA1228

Mercaptan mixture, aliphatic is a clear colorless to light yellow liquid with a very offensive odor. It has a flash point between 100 and 199 deg. F. It is lighter than water and very slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

MERCAPTAN MIXTURE, ALIPHATIC FLAMMABLE LIQUID

4909220
NA1228

Mercaptan mixture, aliphatic is a clear colorless to light yellow liquid with a very offensive odor. It has a flash point of less than 100 deg. F. It is lighter than water and very slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

MERCAPTODIMETHUR ORM-E

4962145
NA2757

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Mercaptodimethur is a white crystalline powder. It is used as a pesticide. It is a wettable powder or water emulsifiable liquid. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

Continued on next page

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with
copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire
fighting water

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount
in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of
pollutants and precipitates

MERCURIC ACETATE**4923241****POISON B****UN1629**

Mercuric acetate is a white crystalline solid with a vinegar like odor.
It is soluble in water and is decomposed by water to form a white
insoluble precipitate. It is toxic by inhalation (dust, etc.) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with
copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involv-
ing this material
If contact with the material anticipated, wear full protective clothing

MERCURIC BENZOATE, SOLID**4923243****POISON B****UN1631**

Mercuric benzoate, solid is a white crystalline solid. It is slightly soluble
in water. It is toxic by inhalation (dust, etc.) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with
copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involv-
ing this material
If contact with the material anticipated, wear full protective clothing

MERCURIC BROMIDE, SOLID**4923244****POISON B****UN1634**

Mercuric bromide, solid is a white crystalline solid. It is very slightly
soluble in water. It is toxic by inhalation (dust, etc.) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with
copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involv-
ing this material
If contact with the material anticipated, wear full protective clothing

MERCURIC CHLORIDE**4923245****POISON B****UN1624**

Mercuric chloride is a white crystalline solid. It is soluble in water. It
is corrosive to the mucous membranes. It is toxic by inhalation (dust
etc.) and ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with
copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involv-
ing this material
If contact with the material anticipated, wear full protective clothing

**MERCURIC CHLORIDE (MERCURIC CHLORIDE AND
CHARCOAL CATALYST, SPENT)****4923271****POISON B****UN1624**

Mercuric chloride and charcoal catalyst, spent is mercuric chloride
deposited on a charcoal carrier base. The mercuric chloride is soluble
in water. It is corrosive to the mucous membranes. It is toxic by ingestion,
and inhalation (dusts, etc.).

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

MERCURIC CYANIDE, SOLID

4923246

POISON B

UN1636

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Mercuric cyanide solid is a white crystalline solid. It is slightly soluble in water. It is gradually decomposed by water and rapidly decomposed by acids to give off hydrogen cyanide, a flammable poison gas. It is toxic by inhalation (dust, and the hydrogen cyanide from decomposition) and by ingestion. Toxic oxides of nitrogen are produced in fires involving this material.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing vapors or dusts
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Add caustic soda
If dissolved, apply sodium sulfide solution to precipitate heavy metals
Add calcium hypochlorite
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Adjust pH to neutral (pH-7)
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

MERCURIC IODIDE, SOLID

4923247

POISON B

UN1638

Mercuric iodide, solid is a red crystalline solid. It is very slightly soluble in water. It is toxic by inhalation (dusts, etc) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

MERCURIC IODIDE, SOLUTION

4923249

POISON B

UN1638

Mercuric iodide, solution is a red liquid. It is slightly soluble in water. It is toxic by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing vapors or dusts

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

MERCURIC NITRATE

4918769

OXIDIZER

UN1625

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)

Mercuric nitrate is a white crystalline solid. It is used to make other chemicals and in medicine. It is soluble in water. It is non-combustible, but it will accelerate the burning of combustible materials. If large quantities are involved in a fire or the combustible material is finely divided, an explosion may result. Prolonged exposure to fire or heat may result in an explosion. Toxic oxides of nitrogen are produced in fires involving this material.

If material on fire or involved in fire

Flood with water

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 2500 feet

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Continued on next page

Environmental considerations—water spill

Add caustic soda

If dissolved, apply sodium sulfide solution to precipitate heavy metals

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Allow to aerate

**MERCURIC OLEATE, SOLID
POISON B****4923250
UN1640**

Mercuric oleate, solid is a yellowish-brown grease-like solid. It is insoluble in water. It is toxic by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

**MERCURIC OXIDE, SOLID
POISON B****4923251
UN1641**

Mercuric oxide, solid is a red-orange powder. It is insoluble in water. It is toxic by inhalation (dust etc.) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

**MERCURIC OXYCYANIDE, SOLID (DESENSITIZED)
POISON B****4923253
UN1642**

Mercuric oxycyanide, solid is a white crystalline solid. It is used in medicine. It is soluble in water. It can explode on prolonged exposure to fire or heat. It decomposes on contact with acid to give off hydrogen cyanide, a flammable poison gas. It is toxic by inhalation (dust and hydrogen cyanide from decomposition) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

**MERCURIC SALICYLATE, SOLID
POISON B****4923255
UN1644**

Mercuric salicylate, solid is a white powder with a yellow or pink tint. It is insoluble in water. It is toxic by inhalation (dust, etc.) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

**MERCURIC SUBSULFATE, SOLID
POISON B****4923256
NA2025**

Mercuric subsulfate, solid is a lemon yellow powder or a yellow scaley material. It is insoluble in water. It is toxic by inhalation (dust, etc.) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

MERCURIC SULFATE, SOLID 4923257
POISON B UN1645
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)

Mercuric sulfate, solid is a white crystalline powder. It is used in medicine, for gold and silver extraction, and to make other mercury compounds. It is decomposed by water to yellow mercuric subsulfate and free sulfuric acid, a corrosive material. It is toxic by inhalation (dust) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind

Avoid bodily contact with the material
Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Add caustic soda
If dissolved, apply sodium sulfide solution to precipitate heavy metals

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Allow to aerate

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

MERCURIC SULFO CYANATE, SOLID (OR) MERCURIC THIOCYANATE 4923258
POISON B UN1646
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)

Mercuric sulfo cyanate is a white crystalline powder. It is very slightly soluble in water. When heated or burned it expands to many times in volume. It is toxic by inhalation (dust) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind

Avoid bodily contact with the material
Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Add caustic soda

If dissolved, apply sodium sulfide solution to precipitate heavy metals

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Allow to aerate

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

MERCURIC-AMMONIUM CHLORIDE, SOLID 4923242
POISON B UN1630

Mercuric-ammonium chloride is a white crystalline solid. It is soluble in water. It is corrosive to the mucous membranes. It is toxic by inhalation (dust, etc.) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

MERCURIC-POTASSIUM CYANIDE, SOLID 4923254
POISON B UN1626

Mercuric—potassium cyanide solid is a colorless crystalline solid. It is soluble in water. It is rapidly decomposed by acids to give off hydrogen cyanide, a flammable poison gas. It is toxic by inhalation (dust, and the hydrogen cyanide from decomposition) and by ingestion. Toxic oxides of nitrogen are produced in fires involving this material.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use foam, carbon dioxide or dry chemical
Do not use water on material itself

If large quantities of combustibles are involved, use water in flooding quantities as spray and fog

Use water spray to absorb vapors

If material not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Do not use water on material itself

Personnel protection

Avoid breathing vapors or dusts
Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

MERCURIC-POTASSIUM IODIDE, SOLID**4923272****POISON B****UN1643**

Mercuric-potassium iodide, solid is a yellow crystalline solid. It absorbs water from the air and dissolves in it. It is soluble in water. It is toxic by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

MERCUROL OR MERCURY NUCLEATE, SOLID**4923259****POISON B****UN1639**

Mercuriol is a brown powder containing a mercury compound. It is soluble in water. It is toxic by inhalation (vapor, dust, etc) and by skin absorption.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

MERCUROUS ACETATE, SOLID**4923266****POISON B****UN1629**

Mercurous acetate, solid is a white crystalline solid with a vinegar like odor. It is soluble in water and is decomposed to white insoluble precipitate. It is toxic by ingestion and by inhalation (dusts, etc).

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

MERCUROUS BROMIDE, SOLID**4923260****POISON B****UN1634**

Mercurous bromide, solid is a white powder darkening on exposure to light. It is insoluble in water. It is toxic by inhalation (dust, etc) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

MERCUROUS GLUCONATE, SOLID**4923261****POISON B****UN1637**

Mercurous gluconate, solid is a white powder. It is slightly soluble in water. It is toxic by inhalation (dust, etc.) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

MERCUROUS IODIDE, SOLID**4923262****POISON B****UN1638**

Mercurous iodide, solid is a light yellow powder. It is insoluble in water. It is toxic by inhalation (dust, etc.) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

MERCURIOUS NITRATE, SOLID 4918752 OXIDIZER, POISONOUS UN1627 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-10/4.54)

Mercurous nitrate, solid is a colorless crystalline material with a faint odor of nitric acid. It is used in medicine and in chemical analysis. It darkens on exposure to light. It is slightly soluble in water and decomposes to a white insoluble precipitate. It will accelerate the burning of combustible material. It is toxic by ingestion or inhalation of dusts, toxic oxides of nitrogen are produced in fires involving this material.

If material on fire or involved in fire

Flood with water
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers

Personnel protection

Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
Approach fire with caution

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 1500 feet

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Add caustic soda
If dissolved, apply sodium sulfide solution to precipitate heavy metals
Allow to aerate
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

MERCURIOUS OXIDE, BLACK, SOLID 4923264 POISON B UN1641

Mercurous oxide, black, solid is a black powder. It is decomposed by light to free mercury and mercuric oxide. It is insoluble in water. It is toxic by inhalation (dust, etc) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

MERCUROUS SULFATE, SOLID 4923265 POISON B UN1628

Mercurous sulfate, solid is a white to yellow crystalline powder. It is insoluble in water. It is toxic by inhalation (dust, etc) and by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog
Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

MERCURY BASED PESTICIDE, LIQUID, N.O.S. 4921651 (COMPOUNDS AND PREPARATIONS) (INSECTICIDES, OTHER THAN AGRICULTURAL, NEC)

POISON B UN2777

Mercury based pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The carrier may burn though it may take some effort to ignite. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone; 800-424-9300.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

MERCURY BASED PESTICIDE, LIQUID, N.O.S. 4921652
(COMPOUNDS AND PREPARATIONS)
(AGRICULTURAL INSECTICIDES, NEC, LIQUID)
POISON B UN2777

Mercury based pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The carrier may burn though it may take some effort to ignite. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

MERCURY BASED PESTICIDE, LIQUID, N.O.S. 4910538
(COMPOUNDS AND PREPARATIONS)
(AGRICULTURAL INSECTICIDES, NEC, LIQUID)
FLAMMABLE LIQUID UN2778

Mercury based pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The primary hazard of this material is the flammability of the carrier. It has a flash point below 100 deg. F. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wear self-contained breathing apparatus when fighting fires involving this material

MERCURY BASED PESTICIDE, LIQUID, N.O.S. 4910537
(COMPOUNDS AND PREPARATIONS)
(INSECTICIDES, OTHER THAN AGRICULTURAL, NEC)
FLAMMABLE LIQUID UN2778

Mercury based pesticide is a liquid or solid dissolved in a liquid carrier. The carrier is water emulsifiable. The primary hazard of this material is the flammability of the carrier. It has a flash point below 100 deg. F. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind.
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wear self-contained breathing apparatus when fighting fires involving this material

MERCURY BASED PESTICIDE, SOLID, N.O.S. 4921653
(COMPOUNDS AND PREPARATIONS)
(INSECTICIDES, OTHER THAN AGRICULTURAL, NEC)
POISON B UN2777

Mercury based pesticide is a solid or a liquid absorbed on a dry carrier. It is a wettable powder. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

MERCURY BASED PESTICIDE, SOLID, N.O.S. 4921654
(COMPOUNDS AND PREPARATIONS)
(AGRICULTURAL INSECTICIDES, NEC, OTHER
THAN LIQUID)

POISON B UN2777

Mercury based pesticide is a solid or a liquid absorbed on a dry carrier. It is a wettable powder. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

MERCURY COMPOUND, SOLID, N.O.S. 4923269
POISON B UN2025

Mercury compound, solid, n.o.s. is a various colored crystalline material containing mercury. It may or may not be water soluble. It is toxic by inhalation (dust) or by ingestion.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Use foam, carbon dioxide or dry chemical

If material not involved in fire

Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

MESITYL OXIDE 4909223
FLAMMABLE LIQUID UN1229

Mesityl oxide is a colorless, oily liquid with a pungent honey-like odor. It is used in paint removers, as a solvent for plastics, and as an insect repellent. It has a flash point of 87 deg. F. It is lighter than water and is slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may spread fire

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

METAL ALKYL, SOLUTION, N.O.S. 4906030
FLAMMABLE LIQUID NA9195
PYROFORIC

Metal alkyl, solution, n.o.s. is a material whose principal property is that of igniting spontaneously in contact with moist air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Do not use water

Use graphite, soda ash or powdered sodium chloride

If material not on fire and not involved in fire

Do not use water

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Keep material dry

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet

If material leaking (not on fire), downwind evacuation must be considered

METAL ALLOY BILLETS, BLOOMS, INGOTS, PIGS, 4926488
SPONGE OR SHOT, NEC, NOT IRRADIATED NOR
REQUIRING PROTECTIVE SHIELDING
(RADIOACTIVE MATERIAL, N.O.S.)

RADIOACTIVE MATERIAL UN2912
 Metal alloy billets, blooms, ingots, pigs, sponge or shot are greyish to silvery colored materials.

Radioactive materials emit certain rays that may be hazardous. These rays can be detected only by instruments. Exposure of humans to intense radiation may be harmful, whereas film may be damaged by radiation from relatively low concentrations.

If material on fire or involved in fire

Contact the local, state, or department of energy radiological response team

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use graphite, soda ash, powdered sodium chloride, or suitable dry powder

Continued on next page

If material not on fire and not involved in fire

Contact the local, state, or department of energy radiological response team

Do not use water

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Keep material dry

Do not attempt to sweep up dry material

Personnel protection

Keep upwind

Avoid breathing dusts, and fumes from burning material

Wear full protective clothing

Wear self-contained breathing apparatus

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

Keep unnecessary people out of incident area until area declared safe by radiological response team

METAL OR METAL ALLOY BILLETS, BLOOMS, INGOTS, PIGS, SPONGE, OR SHOT, NOT IRRADIATED NOR REQUIRING PROTECTIVE SHIELDING (RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY OR LSA, N.O.S.)

4926489

RADIOACTIVE MATERIAL

UN2912

Metal or metal alloy billets, blooms, ingots, pigs, sponge, or shot is greyish to silvery colored material.

Radioactive materials emit certain rays that may be hazardous. These rays can be detected only by instruments. Exposure of humans to intense radiation may be harmful whereas films may be damaged by radiation from relatively low concentrations.

If material on fire or involved in fire

Contact the local, state, or department of energy radiological response team

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use graphite, soda ash, powdered sodium chloride, or suitable dry powder

If material not on fire and not involved in fire

Contact the local, state, or department of energy radiological response team

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Keep upwind

Avoid breathing dusts, and fumes from burning material

Wear full protective clothing

Wear self-contained breathing apparatus

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

Keep unnecessary people out of incident area until area declared safe by radiological response team

METHACRYLIC ACID, GLACIAL (CORROSIVE LIQUID, N.O.S.)

4931402

CORROSIVE MATERIAL, ACIDIC, COMBUSTIBLE

UN1760

Methacrylic acid, glacial is a clear colorless liquid having a pungent odor. It is used to make plastics, it is corrosive to metals and tissue. It is also combustible and has a flash point of 154 deg. f, and a melting point of 61 deg. F. If the material becomes contaminated or is subject to heat, it may polymerize. If the polymerization takes place inside a container, the container may violently rupture. It is lighter than water and is soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to knock-down vapors

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

Approach fire with caution

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet

METHALLYL CHLORIDE (FLAMMABLE LIQUID, N.O.S.)

4908223

FLAMMABLE LIQUID

UN1993

Methallyl chloride is a colorless to straw colored liquid with a sharp penetrating odor. It has a flash point of 11 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may spread fire

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet

If material leaking (not on fire), downwind evacuation must be considered

**METHANE
FLAMMABLE GAS**

**4905755
UN1971**

Methane is a colorless odorless gas. It is easily ignited. It may only be shipped in cylinders. The gas is lighter than air but a flame may flash back to the source of a leak very easily. Under fire conditions the cylinders may violently rupture and rocket.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear protective gloves and goggles
Do not handle broken packages without protective equipment
Approach fire with caution

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

**METHANOL (METHYL ALCOHOL, COLUMBIAN
SPIRITS)
FLAMMABLE LIQUID**

**4909230
UN1230**

Methanol is a clear colorless liquid. It is used to make other chemicals, to remove water from automotive and aviation fuels, as an antifreeze, and as a solvent for various paints and plastics. It has a flash point of 52 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**METHANOL, CONTAMINATED, VALUE ONLY FOR
REFINING (ALCOHOL, N.O.S.)
FLAMMABLE LIQUID**

**4909237
UN1987**

Methanol, contaminated is a clear colorless to variable colored liquid. It has a flash point of 52 deg. F, which may vary depending on contamination. It is lighter than water and may not be completely water soluble. (methanol itself is water soluble.) its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**METHANOL, SOLIDIFIED (ALCOHOL, N.O.S.)
FLAMMABLE LIQUID**

**4910404
UN1987**

Methanol, solidified is a sterno-like gel. The alcohol can separate out. The hazard is flammability.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**METHYL CHLOROCARBONATE (see METHYL
CHLOROFORMATE 4907429)**

**METHYLETHANOLAMINE (COMBUSTIBLE LIQUID,
N.O.S.)**

4913183

COMBUSTIBLE LIQUID

NA1933

Methylethanolamine is a clear colorless liquid. It is used to make other chemicals. It has a flash point of 165 deg. F. It is lighter than water and is soluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Solid streams of water may be ineffective
Use "alcohol" foam, carbon dioxide or dry chemical

Continued on next page

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material

**METHOXYCHLOR (AGRICULTURAL INSECTICIDES, 4960646
NEC, LIQUID)**

**ORM-E NA2761
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)**

Methoxychlor is a white crystalline solid dissolved in a liquid carrier. It is used as a pesticide. It is a water emulsifiable liquid. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

Use natural barriers or oil spill control booms to limit spill motion
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**METHOXYCHLOR (AGRICULTURAL INSECTICIDES, 4960647
NEC, OTHER THAN LIQUID)**

**ORM-E NA2761
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)**

Methoxychlor is a white crystalline solid. It is used as a pesticide. It is a wettable powder. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**METHOXYCHLOR (INSECTICIDES, OTHER THAN 4960648
AGRICULTURAL, NEC)**

**ORM-E NA2761
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)**

Methoxychlor is a white crystalline solid or the solid dissolved in a liquid carrier. It is used as a pesticide. It is a wettable powder or water emulsifiable liquid. It can cause illness by inhalation, skin absorption and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

If material not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Keep upwind
Wear boots, protective gloves, and goggles
Avoid breathing vapors or dusts
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**METHYL ACETATE 4908220
FLAMMABLE LIQUID UN1231**

Methyl acetate is a clear colorless liquid with a fragrant odor. It has a flash point of 14 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard

Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet

If material leaking (not on fire), downwind evacuation must be considered

METHYL ACETOACETATE (COMBUSTIBLE LIQUID, N.O.S.) 4913150

COMBUSTIBLE LIQUID NA1993

Methyl acetoacetate is a clear colorless liquid. It has a flash point of 158 deg. F. It is heavier than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

METHYL ACETONE 4909238 FLAMMABLE LIQUID UN1232

Methyl acetone is a clear colorless liquid composed of acetone, methyl acetate and methanol. It has a flash point of less than 52 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

METHYL AMYL ACETATE 4909235 FLAMMABLE LIQUID UN1233

Methyl amyl acetate is a clear colorless liquid. It has a flash point of 95 deg. F. It is lighter than water and is insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

METHYL AMYL KETONE 4913132 COMBUSTIBLE LIQUID UN1110

Methyl amyl ketone is a clear colorless liquid. It has a flash point of 126 deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

METHYL BROMIDE AND ETHYLENE DIBROMIDE 4921438 MIXTURE, LIQUID

POISON B UN1647 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Methyl bromide and ethylene dibromide mixture, liquid is the mixture of two liquids having a chloroform like odor. Neither material is combustible. Both are very slightly soluble in water. The mixture is toxic by inhalation and skin absorption.

It weighs 18.0 pounds per gallon.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Continued on next page

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

- Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

METHYL BROMIDE AND MORE THAN 2% CHLOROPICRIN MIXTURE, LIQUID 4921437
POISON B NA1581

Methyl bromide and more than 2% chloropicrin mixture, liquid is a mixture of two liquids. Neither is combustible or water soluble. They are toxic by inhalation. Prolonged or repeated skin contact can cause severe burns and possible absorption of toxic quantities of the material.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Use foam, carbon dioxide or dry chemical

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If material leaking (not on fire), downwind evacuation must be considered

METHYL BROMIDE AND NONFLAMMABLE NONLIQUEFIED COMPRESSED GAS MIXTURE, LIQUID 4921439
POISON B NA1955

Methyl bromide and nonflammable nonliquefied compressed gas mixture, liquid is a liquid charged with a gas. It is non-combustible and has a chloroform-like odor. It is very slightly soluble in water. It is toxic by inhalation.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If material leaking (not on fire), downwind evacuation must be considered

METHYL BROMIDE, LIQUID (INCLUDING UP TO 2% CHLOROPICRIN) 4921440
POISON B UN1062

Methyl bromide is colorless liquid with a chloroform-like odor. Under most circumstances it is non-combustible. It is very slightly soluble in water. It is toxic by inhalation. Prolonged or repeated skin contact can cause severe burns and possible absorption of toxic quantities of the material.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Use foam, carbon dioxide or dry chemical

If material not involved in fire

- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If material leaking (not on fire), downwind evacuation must be considered

METHYL BUTENE FLAMMABLE LIQUID 4909225
UN2460

Methyl butene is a clear colorless liquid with a petroleum like odor. It has a flash point of less than 20 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

METHYL BUTYL KETONE (FLAMMABLE LIQUID, N.O.S.) 4909242

FLAMMABLE LIQUID UN1993

Methyl butyl ketone is a clear colorless liquid. It has a flash point of 95 deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

METHYL BUTYRATE 4909226
FLAMMABLE LIQUID UN1237

Methyl butyrate is a clear colorless liquid. It has a flash point of 37 deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

METHYL CHLORIDE 4905761
FLAMMABLE GAS UN1063

Methyl chloride is a colorless gas with a faint sweet odor. It is used to make other chemicals and as a herbicide. It is shipped as a liquefied gas under its vapor pressure. Contact with the liquid can cause frostbite. It is easily ignited. Its vapors are heavier than air, and a flame can flash back to the source of leak very easily. The leak can be either a liquid or vapor leak. It can asphyxiate by the displacement of air. Under fire conditions the cylinder or tank car may violently rupture and rocket.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Wear protective gloves and goggles
Do not handle broken packages without protective equipment
Approach fire with caution

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
If material leaking (not on fire), downwind evacuation must be considered

METHYL CHLORIDE-METHYLENE CHLORIDE 4905764
MIXTURE 4905764
FLAMMABLE GAS UN1912

Methyl chloride-methylene chloride is a colorless gas with a faint sweet odor. It is shipped as a liquefied gas under its vapor pressure. Contact with the liquid can cause frostbite. It is easily ignited. Its vapors are heavier than air and a flame can flash back to the source of leak very easily. It can asphyxiate by the displacement of air. Under fire conditions the cylinders or tank cars may violently rupture or rocket.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Wear protective gloves and goggles
Do not handle broken packages without protective equipment
Approach fire with caution

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
If material leaking (not on fire), downwind evacuation must be considered

METHYL CHLOROFORMATE 4907429
FLAMMABLE LIQUID, CORROSIVE UN1238

Methyl chloroformate is a colorless liquid with a pungent odor. It has a flash point of 54 deg. F. It is slightly soluble in water and decomposed by water to hydrochloric acid with evolution of heat. It is corrosive to metals and tissue. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use "alcohol" foam, carbon dioxide or dry chemical
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

METHYL DICHLOROACETATE 4933350
CORROSIVE MATERIAL, ACIDIC, COMBUSTIBLE UN2299

Methyl dichloroacetate is a colorless liquid with an ethereal odor. It is used to make other chemicals. It is combustible and has a flash point of 176 deg. F. It is decomposed by water to dichloroacetic acid, a corrosive material with evolution of heat. It is corrosive to metals and tissue.

If material on fire or involved in fire

- Use dry chemical, carbon dioxide, or dry sand
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

METHYL ETHYL KETONE (ETHYL METHYL KETONE) 4909243
FLAMMABLE LIQUID UN1193

Methyl ethyl ketone is a clear colorless liquid with an acetone-like odor. It is used as a solvent for paints, plastics, and adhesives. It has a flash point of 21 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

METHYL ETHYL KETONE PEROXIDE, (IN SOLUTION WITH NOT MORE THAN 9% BY WEIGHT ACTIVE OXYGEN) 4919178

ORGANIC PEROXIDE UN2550

Methyl ethyl ketone peroxide, (in solution with not more than 9% by weight active oxygen) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is insoluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Dangerously explosive

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Keep spilled material wet
- Wet spilled material before picking it up

Personnel protection

- Avoid breathing dusts, and fumes from burning material
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

- If contact with the material anticipated, wear full protective clothing
- Approach fire with caution

Evacuation

- If the material is on fire or involved in fire evacuate for a radius of 2500 feet

METHYL ETHYL PYRIDINE 4935660
CORROSIVE MATERIAL, BASIC, COMBUSTIBLE UN2300

Methyl ethyl pyridine is a colorless liquid with a sharp penetrating odor. It is combustible and has a flash point of 165 deg. F. It is slightly soluble in water. It is corrosive to metals and tissue. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Solid streams of water may be ineffective
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material
- If contact with the material anticipated, wear full protective clothing

METHYL FORMATE 4908225
FLAMMABLE LIQUID UN1243

Methyl formate is a clear colorless liquid with an agreeable odor. It has a flash point of -27 deg. F. It is lighter than water and reacts with water to give formic acid, a corrosive material and methyl alcohol, another flammable liquid. Both of these materials are soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use "alcohol" foam, carbon dioxide or dry chemical
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Do not use water on material itself

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

METHYL HYDRAZINE 4906230
FLAMMABLE LIQUID, POISONOUS, CORROSIVE UN1244
THERMALLY UNSTABLE

Methyl hydrazine is a colorless liquid with an ammonia-like odor. It is used to make other chemicals, as a solvent, and as a rocket propellant. It has a flash point of 17 deg. F. It is flammable over a wide range of vapor air concentrations. It may ignite spontaneously in contact with porous materials such as earth, wood, cloth, etc., and with oxidizing materials. It is toxic and the vapors attack the eyes and respiratory system. It is also corrosive to the skin. It is lighter than water and slightly soluble in water. The vapors are heavier than air. Prolonged exposure of the containers of the material to fire or heat may result in the spontaneous decomposition of the material and violent rupture of the container. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 5000 feet
- If material leaking (not on fire), downwind evacuation must be considered

METHYL ISOBUTYL CARBINOL (COMBUSTIBLE 4913143
LIQUID, N.O.S.) UN1987
COMBUSTIBLE LIQUID

Methyl isobutyl carbinol is a clear colorless liquid. It has a flash point of 120 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to disperse vapors and dilute standing pools of liquid

Continued on next page

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

METHYL ISOBUTYL KETONE (FLAMMABLE LIQUID, N.O.S.) 4909245**FLAMMABLE LIQUID UN1993**

Methyl isobutyl ketone is a clear colorless liquid with a pleasant odor. It has a flash point of 73 deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

METHYL ISOBUTYL KETONE PEROXIDE, (IN SOLUTION WITH NOT MORE THAN 9% BY WEIGHT ACTIVE OXYGEN) 4919180**ORGANIC PEROXIDE UN2126**

Methyl isobutyl ketone peroxide, (in solution with not more than 9% by weight active oxygen) is a colorless to pale yellow liquid. It is used to manufacture paints, plastics, and rubber. It is slightly soluble in water. The liquid or solution may require some effort to ignite; but once ignited, it will burn with increasing rapidity as the fire progresses. If spilled on combustible materials, spontaneous ignition of the material may occur. Contamination with many chemical substances can cause a violent chemical reaction. It supports the burning of combustible materials. Under prolonged exposure to fire or heat containers of the material may explode.

If material on fire or involved in fire

Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Dangerously explosive

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Keep spilled material wet
Wet spilled material before picking it up

Personnel protection

Avoid breathing dusts, and fumes from burning material
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing
Approach fire with caution

Evacuation

If the material is on fire or involved in fire evacuate for a radius of 2500 feet

METHYL ISOPROPENYL KETONE, INHIBITED 4907240
FLAMMABLE LIQUID UN1246
POLYMERIZATION

Methyl isopropenyl ketone is a clear colorless liquid. It has a flash point of 52 deg. F. If contaminated or subjected to heat it may polymerize if methyl isopropenyl ketone is confined in a container when polymerization takes place the container may violently rupture. It is heavier than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
If material leaking (not on fire), downwind evacuation must be considered

METHYL MAGNESIUM BROMIDE IN ETHYL ETHER 4908230
FLAMMABLE LIQUID UN1928

This is the solution of methyl magnesium bromide in ethyl ether. Ethyl ether has a flash point of -49 deg. F. The solution reacts with water to give methane, a flammable gas. The heat of this reaction may be sufficient to ignite the methane. The vapors of ethyl ether are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use "alcohol" foam, carbon dioxide or dry chemical
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Do not use water on material itself

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors
Do not use water on material itself

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

METHYL MERCAPTAN

4905520

FLAMMABLE GAS, CORROSIVE

UN1064

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Methyl mercaptan is a colorless gas with a very strong disagreeable odor of rotten cabbage. It is shipped as a liquefied gas under its vapor pressure. Contact with the liquid can cause frostbite or chemical type burn. It is slightly soluble in water. It is easily ignited. Its vapor is heavier than air and a flame can flash back to the source of leak very easily. It can asphyxiate by the displacement of air. Under fire conditions the cylinders or tank cars may violently rupture and rocket.

It weighs 7.3 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Approach fire with caution

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
- If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- Use natural barriers or oil spill control booms to limit spill motion
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

METHYL METHACRYLATE MONOMER, INHIBITED

4907250

FLAMMABLE LIQUID

UN1247

POLYMERIZABLE

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Methyl methacrylate monomer is a clear colorless liquid. It is used to make plastics. It has a flash point of 50 deg. F. The vapors are irritating to the eyes and respiratory system. If contaminated or subjected to heat, it may polymerize. If the polymerization takes place in a container, the container is subject to violent rupture. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

It weighs 7.8 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
- If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents
- Apply "universal" gelling agent to immobilize spill
- Apply fluorocarbon-water foam to diminish vapor and fire hazard

Environmental considerations—water spill

- Use natural barriers or oil spill control booms to limit spill motion
- Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material
- Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Remove trapped material with suction hoses
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

METHYL METHOXY PENTANONE (COMBUSTIBLE

4913138

LIQUID, N.O.S.)

COMBUSTIBLE LIQUID

NA1993

Methyl methoxy pentanone is a clear colorless liquid. It is used as a solvent. It has a flash point of 141 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

Continued on next page

If material on fire or involved in fire
 Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may spread fire
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Use water spray to knock-down vapors

Personnel protection
 Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

METHYL NORBORNENE DICARBOXYLIC ANHYDRIDE
 (See MEMTETRAHYDRO PHTHALIC ANHYDRIDE
 4931441)

METHYL PARATHION MIXTURE, DRY 4921443
POISON B NA2783
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Methyl parathion mixture, dry is the liquid material absorbed on a dry carrier. Methyl parathion is very slightly soluble in water. Methyl parathion is a combustible liquid but the combustibility depends on the nature of the carrier and quantity of methyl parathion. It is toxic by skin absorption and inhalation (vapor, dust, etc.) in case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300

If material on fire or involved in fire
 Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
 Use water in flooding quantities as fog
 Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers

Personnel protection
 Avoid breathing dusts, and fumes from burning material
 Keep upwind
 Avoid bodily contact with the material
 Wear full protective clothing
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 Wear self-contained breathing apparatus when fighting fires involving this material

Environmental considerations—land spill
 Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill
 Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
 If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
 Remove trapped material with suction hoses
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

METHYL PARATHION MIXTURE, LIQUID (CONTAINING 25% OR LESS METHYL PARATHION) 4921444

POISON B NA2783
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Methyl parathion mixture, liquid is the solution of methyl parathion and a liquid or solid dissolved in it. Methyl parathion is slightly soluble in water and is itself a combustible liquid. The combustibility of the mixture depends upon the nature of the other material dissolved in the solution. It is toxic by inhalation and by skin absorption. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300

If material on fire or involved in fire
 Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to knock-down vapors

Personnel protection
 Avoid breathing vapors
 Keep upwind
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear full protective clothing
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation
 If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill
 Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill
 Use natural barriers or oil spill control booms to limit spill motion
 Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material
 Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms
 If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
 Remove trapped material with suction hoses
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill
 Apply water spray or mist to knock down vapors

METHYL PARATHION MIXTURE, LIQUID (CONTAINING OVER 25% METHYL PARATHION) 4921447

POISON B NA2783
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Methyl parathion mixture, liquid is the solution of methyl parathion and a liquid or solid dissolved in it. Methyl parathion is slightly soluble in water and is itself a combustible liquid. The combustibility of the mixture depends upon the nature of the other material dissolved in the solution. It is toxic by inhalation and by skin absorption. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

Use natural barriers or oil spill control booms to limit spill motion
Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material
Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Remove trapped material with suction hoses
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

**METHYL PENTANE
FLAMMABLE LIQUID****4908191
UN2462**

Methyl pentane is a clear colorless liquid with a petroleum like odor. It has a flash point of -10 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

**METHYL PENTADIENE
FLAMMABLE LIQUID****4908173
UN2461**

Methyl pentadiene is a clear colorless liquid with a petroleum like odor. It has a flash point of -30 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**METHYL PHOSPHONOTHIOIC DICHLORIDE,
ANHYDROUS****4933338****CORROSIVE MATERIAL, POISONOUS****NA1760**

Methyl phosphonothioic dichloride, anhydrous is a colorless liquid with a pungent odor. It is noncombustible. It is toxic by inhalation. It is heavier than water and reacts with water to give hydrochloric acid, a corrosive material, with release of heat. It is corrosive to metals and tissue.

If material on fire or involved in fire

Use "alcohol" foam, carbon dioxide or dry chemical
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Do not use water on material itself

If large quantities of combustibles are involved, use water in flooding quantities as spray and fog

Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors
Do not use water on material itself
Neutralize spilled material with crushed limestone, soda ash, or lime

Continued on next page

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear full protective clothing
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

METHYL PHOSPHONOUS DICHLORIDE
CORROSIVE MATERIAL
PYROFORIC

4933337
 NA2845

Methyl phosphonous dichloride is a colorless liquid with a pungent odor. It is pyroforic and will spontaneously ignite on contact with moist air or water. It is heavier than water and besides igniting on contact with water hydrochloric acid, a corrosive material, is produced. It is corrosive to metals and tissue.

If material on fire or involved in fire

Use "alcohol" foam, carbon dioxide or dry chemical
 Do not use water on material itself
 If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
 Use water spray to absorb vapors
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to knock-down vapors
 Do not use water on material itself
 Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear full protective clothing
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

METHYL PROPIONATE
FLAMMABLE LIQUID

4909240
 UN1248

Methyl propionate is a clear colorless liquid. It is used as a flavoring and as a solvent. It has a flash point of 28 deg. F. It is lighter than water and is slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may spread fire
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

METHYL PROPYL KETONE
FLAMMABLE LIQUID

4909216
 UN1249

Methyl propyl ketone is a clear colorless liquid with an odor of fingernail polish. It has a flash point of 45 deg. F. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may spread fire
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

METHYL SULFATE (See DIMETHYL SULFATE 4933322)
METHYL SULFIDE (See DIMETHYL SULFIDE 4908122)

METHYL VINYL KETONE, INHIBITED
FLAMMABLE LIQUID
POLYMERIZABLE

4907260
 UN1251

Methyl vinyl ketone is a clear colorless liquid. It has a flash point of 20 deg. F. If contaminated or subjected to heat it may polymerize. If the polymerization takes place in a container, the container may violently rupture. It is lighter than water and soluble in water. Its vapors are heavier than air. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet
If material leaking (not on fire), downwind evacuation must be considered

N-METHYL-N'-NITRO-N-NITROSOGUANIDINE FLAMMABLE SOLID

4916723
NA1325

N-methyl-n'-nitro-n-nitrosoguanidine

If material on fire or involved in fire

Flood with water

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Keep material dry

Personnel protection

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may spread fire

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet

If material leaking (not on fire), downwind evacuation must be considered

METHYLACETYLENE-PROPADIENE, STABILIZED FLAMMABLE GAS

4905758
UN1060

Methylacetylene-propadiene stabilized is a colorless gas with an acetylene like odor. It is shipped as a liquefied gas under its vapor pressure. Contact with the liquid can cause frostbite. It is easily ignited. Its vapors are heavier than air and a flame can flash back to the source of leak very easily. This leak may be either a liquid or a vapor leak. It can asphyxiate by the displacement of air. Under fire conditions the cylinders or tank cars may violently rupture and rocket.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

Approach fire with caution

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet

If material leaking (not on fire), downwind evacuation must be considered

METHYLAL FLAMMABLE LIQUID

4908222
UN1234

Methylal is a clear colorless liquid with a chloroform-like odor. It has a flash point of 0 deg. F. It is lighter than water and soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors

Keep upwind

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet

If material leaking (not on fire), downwind evacuation must be considered

METHYLACRYLATE, INHIBITED FLAMMABLE LIQUID POLYMERIZABLE

4907245
UN1919

Methyl acrylate is a clear colorless liquid with an acrid odor. It has a flash point of 27 deg. F. The vapors are irritating to the eyes and respiratory system. If the material is subjected to heat for prolonged periods or becomes contaminated, it is subject to polymerization with evolution of heat. If the polymerization takes place inside a container, the container may violently rupture. The material is lighter than water and is slightly soluble in water. Its vapors are heavier than air.

METHYLCHLOROMETHYL ETHER, ANHYDROUS FLAMMABLE LIQUID, POISONOUS

4907430
UN1239

Methylchloromethyl ether is a clear colorless liquid. It has a flash point of -4 deg. F. It is irritating to the eyes and respiratory system. Prolonged exposure to its vapors may result in death. It is heavier than water and is decomposed by water to form hydrochloric acid, a corrosive material. Its vapors are heavier than air.

Continued on next page

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

**METHYLCYCLOHEXANE
FLAMMABLE LIQUID**

**4909330
UN2296**

Methyl cyclohexane is a clear colorless liquid with a petroleum like odor. It has a flash point of 25 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may spread fire
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

**METHYLDICHLOROARSINE
POISON A**

**4905520
NA1556**

Methyldichloroarsine is a colorless liquid with a strong burning odor. In low concentrations it is very irritating to the respiratory system and in higher concentrations or prolonged exposure to low concentrations it is toxic by inhalation. Contact with the liquid will cause very painful burns. The material may only be shipped in cylinders and these must be overpacked in wooden boxes. Prolonged exposure to fire or heat may cause the cylinders to violently rupture and rocket

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical

If material not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Attempt to stop leak if without hazard
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If material leaking (not on fire), downwind evacuation must be considered

**METHYLDICHLOROSILANE
FLAMMABLE LIQUID, CORROSIVE, ACIDIC**

**4907625
UN1242**

Methyldichlorosilane is a colorless fuming liquid with a pungent odor. It has a flash point of -26 deg. F. Vapor and liquid can cause burns. It is heavier than water and is decomposed by water to form hydrochloric acid, a corrosive material. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use "alcohol" foam, carbon dioxide or dry chemical
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Do not use water on material itself
If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to knock-down vapors
Do not use water on material itself
Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors
Keep upwind
Wear self-contained breathing apparatus
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

**METHYLFURAN
FLAMMABLE LIQUID**

**4906210
UN2301**

Methylfuran is a clear colorless liquid with an ether like odor. It has a flash point of -22 deg. F. It is lighter than water and insoluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

METHYLMETHACRYLATE MONOMER, UNINHIBITED 4907255
FLAMMABLE LIQUID NA1247
POLYMERIZABLE
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-5000/2270)

Methyl methacrylate monomer, uninhibited is a clear colorless liquid. It is used to make plastics. It has a flash point of 50 deg. F. The vapors are irritating to the eyes and respiratory system. Containers of the material must be shipped under refrigeration, or the chilled material may be shipped in heavily insulated containers. If the material becomes contaminated or the chilled material warms up, it may polymerize. If the polymerization takes place inside a container, the container is subject to violent rupture. It is lighter than water and slightly soluble in water. Its vapors are heavier than air.

It weighs 7.8 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may spread fire
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents

Apply "universal" gelling agent to immobilize spill

Apply fluorocarbon-water foam to diminish vapor and fire hazard

Environmental considerations—water spill

Use natural barriers or oil spill control booms to limit spill motion

Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material

Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Remove trapped material with suction hoses

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

METHYLTRICHLOROSILANE 4907630
FLAMMABLE LIQUID, CORROSIVE, ACIDIC UN1250

Methyltrichlorosilane is a colorless fuming liquid with a pungent odor. It has a flash point of 8 deg. F. Vapor and liquid can cause burns. It is heavier than water and is decomposed by water to form hydrochloric acid, a corrosive material. Its vapors are heavier than air.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use "alcohol" foam, carbon dioxide or dry chemical
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Do not use water on material itself
- If large quantities of combustibles are involved, use water in flooding quantities as spray and fog
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors
- Do not use water on material itself
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

METHYL PARATHION, LIQUID 4921442
POISON B, COMBUSTIBLE NA2783
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-100/45.4)

Methyl parathion, liquid is a clear colorless liquid. It is used as a pesticide. It is slightly soluble in water and it is a combustible liquid. It is toxic by inhalation and skin absorption. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300

It weighs 11.3 pounds per gallon.

Continued on next page

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

- Use natural barriers or oil spill control booms to limit spill motion
- Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material
- Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms
- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Remove trapped material with suction hoses
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

MEVINPHOS (AGRICULTURAL INSECTICIDES, NEC, 4921531 LIQUID)**POISON B NA2783 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)**

Mevinphos is a yellow to orange liquid. It is used as a pesticide. It is a water emulsifiable liquid. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind

Wear self-contained breathing apparatus**Avoid bodily contact with the material****Wear full protective clothing****Do not handle broken packages without protective equipment****Wash away any material which may have contacted the body with copious amounts of water or soap and water****Environmental considerations—land spill**

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder**Environmental considerations—water spill**

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

- Apply water spray or mist to knock down vapors

MEVINPHOS (AGRICULTURAL INSECTICIDES, NEC, 4921532 OTHER THAN LIQUID)**POISON B NA2783 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1 0.454)**

Mevinphos is a yellow to orange liquid absorbed on a dry carrier. It is used as a pesticide. It is a wettable powder. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog**Use "alcohol" foam, carbon dioxide or dry chemical****If material not on fire and not involved in fire**

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers

Personnel protection

- Avoid breathing dusts, and fumes from burning material

Keep upwind**Avoid bodily contact with the material****Wear boots, protective gloves, and goggles****Do not handle broken packages without protective equipment****Wash away any material which may have contacted the body with copious amounts of water or soap and water****Wear self-contained breathing apparatus when fighting fires involving this material****If contact with the material anticipated, wear full protective clothing****Environmental considerations—land spill**

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill

- If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
- Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

MEVINPHOS (INSECTICIDES, OTHER THAN 4921533 AGRICULTURAL, NEC)**POISON B NA2783 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)**

Mevinphos is a yellow to orange liquid or the liquid absorbed on a dry carrier. It is used as a pesticide. It is a wettable powder or water emulsifiable liquid. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear full protective clothing
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

MEVINPHOS MIXTURE, LIQUID (AGRICULTURAL INSECTICIDES, NEC, LIQUID)

4921539

POISON B

NA2783

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Mevinphos mixture, liquid is a yellow to orange liquid. It is used as a pesticide. It is a water emulsifiable liquid. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
 Keep upwind
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear full protective clothing
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

MEXACARBATE (AGRICULTURAL INSECTICIDES, NEC, LIQUID)

4921541

POISON B

NA2757

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Mexacarbate is a white solid dissolved in a liquid carrier. It is used as a pesticide. It is a water emulsifiable liquid. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
 Use water in flooding quantities as fog
 Solid streams of water may be ineffective
 Cool all affected containers with flooding quantities of water
 Apply water from as far a distance as possible
 Use "alcohol" foam, carbon dioxide or dry chemical

*Continued on next page***MEVINPHOS MIXTURE, DRY (AGRICULTURAL INSECTICIDES, NEC, OTHER THAN LIQUID)**

4921538

POISON B

NA2783

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1/0.454)

Mevinphos mixture, dry is a yellow to orange liquid absorbed on a dry carrier. It is used as a pesticide. It is a wettable powder. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone: 800-424-9300.

If material on fire or involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
 Use water in flooding quantities as fog
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers

Personnel protection

Avoid breathing dusts, and fumes from burning material
 Keep upwind
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers
 Build dikes to contain flow as necessary
 Attempt to stop leak if without hazard
 Use water spray to knock-down vapors

Personnel protection
 Avoid breathing vapors
 Keep upwind
 Wear self-contained breathing apparatus
 Avoid bodily contact with the material
 Wear full protective clothing
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water

Environmental considerations—land spill
 Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
 Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill
 If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill
 Apply water spray or mist to knock down vapors

**MEXACARBATE (AGRICULTURAL INSECTICIDES, 4921542
 NEC, OTHER THAN LIQUID)
 POISON B NA2757
 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)**

Mexacarbate is a white solid. It is used as a pesticide. It is a wettable powder. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone; 800-424-9300.

If material on fire or involved in fire
 Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
 Use water in flooding quantities as fog
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers

Personnel protection
 Avoid breathing dusts, and fumes from burning material
 Keep upwind
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill
 Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water

Environmental considerations—water spill
 Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom
 If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

**MEXACARBATE (INSECTICIDES, OTHER THAN 4921540
 AGRICULTURAL, NEC)
 POISON B NA2757
 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)**

Mexacarbate is a white solid or the solid dissolved in a liquid carrier. It is used as a pesticide. It is a wettable powder or water emulsifiable liquid. It is toxic by inhalation, skin absorption, and/or ingestion. In case of damage to, or leaking from containers of this material contact the pesticide safety team network. Telephone; 800-424-9300.

If material on fire or involved in fire
 Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
 Use water in flooding quantities as fog
 Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away
 Keep material out of water sources and sewers

Personnel protection
 Avoid breathing dusts, and fumes from burning material
 Keep upwind
 Avoid bodily contact with the material
 Wear boots, protective gloves, and goggles
 Do not handle broken packages without protective equipment
 Wash away any material which may have contacted the body with copious amounts of water or soap and water
 Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Environmental considerations—land spill
 Dig a pit, pond, lagoon, holding area to contain liquid or solid material
 Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
 Absorb bulk liquid with fly ash or cement powder

Environmental considerations—water spill
 If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
 Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill
 Apply water spray or mist to knock down vapors

**MILD DETONATING FUSE, METAL CLAD 4903355
 CLASS C EXPLOSIVE**

Mild detonating fuse, metal clad consists of a core containing not more than 15 grains of high explosive composition per foot and not exceeding 26 feet in length or containing not more than 2 1/2 grains of high explosive composition per foot covered with metal. It may or may not be covered with tapes, yarns, plastics or waterproofing compounds. Under fire conditions they will explode.

If material on fire or involved in fire
 Dangerously explosive
 Flood with water
 Apply water from as far a distance as possible

If material not on fire and not involved in fire
 Keep sparks, flames, and other sources of ignition away

Personnel protection
 Approach fire with caution
 Avoid breathing dusts, and fumes from burning material
 Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation
 If fire becomes uncontrollable—evacuate for a radius of 1500 feet

MINE RESCUE EQUIPMENT CONTAINING CARBON DIOXIDE 4904845

NONFLAMMABLE GAS NA1956

Mine rescue equipment containing carbon dioxide consists of various apparatus and a cylinder of carbon dioxide. Carbon dioxide is nonflammable and is heavier than air. It can asphyxiate by the displacement of air.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Personnel protection

Avoid breathing vapors

Wear protective gloves and goggles

Do not handle broken packages without protective equipment

MINING REAGENT, LIQUID (CONTAINING 20% OR MORE CRESYLIC ACID) 4931442

CORROSIVE MATERIAL, ACIDIC NA2022

Mining reagent, liquid (containing 20% or more cresylic acid) is a variable colored liquid with a phenol-like odor. It is insoluble in water. It is corrosive to tissue.

If material on fire or involved in fire

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

MIXED CHLOROSILANES (FLAMMABLE LIQUID, CORROSIVE, N.O.S.) 4907636

FLAMMABLE LIQUID, CORROSIVE UN2924

Mixed chlorosilanes are a clear colorless liquid having a pungent odor. It has a flash point of less than 100 deg. F. Both the liquid and vapor are corrosive. It is decomposed by water to give hydrochloric acid. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use "alcohol" foam, carbon dioxide or dry chemical

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Do not use water on material itself

If large quantities of combustibles are involved, use water in flooding quantities as spray and fog

Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Do not use water on material itself

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Avoid bodily contact with the material

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet

If material leaking (not on fire), downwind evacuation must be considered

MIXED LOAD OF GROCERIES AND GROCERS SUPPLIES 4950160

Consult shipping paper for exact contents of the car, container or trailer

MONO-(TRICHLORO) TETRA-(MONOPOTASSIUM DICHLORO) PENTA-S-TRIAZINETRIONE (DRY CONTAINING MORE THAN 39% AVAILABLE CHLORINE) 4916420

OXIDIZER NA2468

Mono-(trichloro)tetra-(monopotassium dichloro) penta-s-triazinetriene is a white crystalline solid with an odor of chlorine. It is used as a dry bleach in household cleaning compounds and swimming pool disinfectants. The material itself is noncombustible but if contaminated with combustible material ignition can result. It will also accelerate the burning of combustible material. Contact with ammonium compounds or hydrated salts can cause a very vigorous chemical reaction. May vigorously react with small quantities of water releasing chlorine gas. Prolonged exposure of the material to fire or heat may result in the vigorous decomposition of the material and the rupturing of its containers. Material containing less than 39% available chlorine will undergo reactions as described above though it may take longer to initiate and the resulting reaction may not be as vigorous.

If material on fire or involved in fire

Flood with water

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Personnel protection

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

Approach fire with caution

Evacuation

If fire becomes uncontrollable—evacuate for a radius of 2500 feet

MONO-TERT-BUTYL-META-CRESOL (COMBUSTIBLE LIQUID, N.O.S.) 4913172

COMBUSTIBLE LIQUID NA1993

Mono-tert-butyl-meta-cresol is a clear colorless liquid. It is used as a disinfectant, to make rubber, as a lubricating oil additive, and for many other uses. It has a flash point of 116 deg. F, and a melting point of 74 deg. F. It is lighter than water and insoluble in water.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

MONOBROMOTRIFLUOROMETHANE 4904549
NONFLAMMABLE GAS UN1009

Monobromotrifluoromethane is a colorless, odorless gas. It is shipped as a liquefied gas under its own vapor pressure. It is noncombustible. It can asphyxiate by the displacement of air. Contact with the liquid can cause frostbite.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Attempt to stop leak if without hazard

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment

MONOCHLOROACETIC ACID, LIQUID 4931444
CORROSIVE MATERIAL, ACIDIC UN1750

Monochloroacetic acid, liquid is a colorless solution of the white crystalline solid. It is corrosive to metals and tissue.

If material on fire or involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material

- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- If contact with the material anticipated, wear full protective clothing

MONOCHLOROACETONE, STABILIZED OR INHIBITED 4925250
IRRITATING MATERIAL UN1695

Monochloroacetone, stabilized or inhibited is a colorless liquid with the pungent odor characteristic of hydrochloric acid. Its vapors are extremely irritating to the eyes and mucous membranes.

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Use "alcohol" foam, carbon dioxide or dry chemical
- Cool all affected containers with flooding quantities of water
- Use water spray to absorb vapors

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

- If contact with the material anticipated, wear full protective clothing

Evacuation

- If material leaking (not on fire), downwind evacuation must be considered

MONOCHLORODIFLUOROMETHANE 4904552
NONFLAMMABLE GAS UN1018

Monochlorodifluoromethane is a colorless gas with an ethereal odor. It is shipped as a liquefied gas under its own vapor pressure. It is noncombustible. It can asphyxiate by the displacement of air. Contact with the liquid can cause frostbite. Toxic gases can be produced in fires involving this material.

If material involved in fire

- Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible

If material not involved in fire

- Attempt to stop leak if without hazard

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear protective gloves and goggles
- Do not handle broken packages without protective equipment

MONOCHLOROETHYLENE (See VINYL CHLORIDE, MONOMER 4905792)

MONOCHLOROPENTAFLUOROETHANE 4904555
NONFLAMMABLE GAS UN1020

Monochloropentafluoroethane is a colorless odorless gas with an ether like odor. It is shipped as a liquefied gas under its own vapor pressure. It is noncombustible. It can asphyxiate by the displacement of air. Contact with the liquid can cause frostbite.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Personnel protection

Avoid breathing vapors
Keep upwind
Wear protective gloves and goggles
Do not handle broken packages without protective equipment

**MONOCHLOROTETRAFLUOROETHANE
NONFLAMMABLE GAS**

**4904558
UN1021**

Monochlorotetrafluoroethane is a colorless odorless gas. It is shipped as a liquefied gas under its own vapor pressure. It can asphyxiate by the displacement of air. Contact with the liquid can cause frostbite. It may only be shipped in cylinders.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Personnel protection

Avoid breathing vapors
Keep upwind
Wear protective gloves and goggles
Do not handle broken packages without protective equipment

**MONOCHLOROTRIFLUOROMETHANE
NONFLAMMABLE GAS**

**4904560
UN1022**

Monochlorotrifluoromethane is a colorless odorless gas. It is shipped as a liquefied gas under its own vapor pressure. It is noncombustible. It can asphyxiate by the displacement of air. Contact with the liquid can cause frostbite.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire
(Material itself does not burn or burns with difficulty.)
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible

If material not involved in fire

Attempt to stop leak if without hazard

Personnel protection

Avoid breathing vapors
Keep upwind
Wear protective gloves and goggles
Do not handle broken packages without protective equipment

**MONOETHANOLAMINE
CORROSIVE MATERIAL, BASIC, COMBUSTIBLE**

**4935665
UN2491**

Monoethanolamine is a clear colorless liquid with an ammonia like odor. It is combustible and has a flash point of 185 deg. F. It is soluble in water with release of heat. It is corrosive to metals and tissue. Toxic oxides of nitrogen are produced during combustion of this material.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Solid streams of water may be ineffective
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

**MONOETHYLAMINE
FLAMMABLE LIQUID, BASIC
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)**

**4907835
UN1036**

Monoethylamine is a clear colorless liquid with an ammonia-like odor. It has a flash point of less than 0 deg. F. and boils at 62 deg. F. It is corrosive to the skin and eyes. It is lighter than water and soluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material.

It weighs 5.7 pounds per gallon.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents
Apply "universal" gelling agent to immobilize spill
Neutralize with sodium bisulfate (nahso4)

Continued on next page

Environmental considerations—water spill

Add sodium bisulfate

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Vapor knockdown water is corrosive or toxic and should be diked for containment

MONOFLUOROPHOSPHORIC ACID, ANHYDROUS 4930240
CORROSIVE MATERIAL, ACIDIC UN1776

Monofluorophosphoric acid, anhydrous is a colorless odorless liquid. It is soluble in water with release of heat. It is corrosive to metals and tissue.

If material involved in fire

Extinguish fire using agent suitable for type of surrounding fire (Material itself does not burn or burns with difficulty.)

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not involved in fire

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Neutralize spilled material with crushed limestone, soda ash, or lime

Personnel protection

Avoid breathing vapors

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

If contact with the material anticipated, wear full protective clothing

MONOISOPROPANOLAMINE (CORROSIVE LIQUID, 4935626
N.O.S.)

CORROSIVE MATERIAL, BASIC UN1760

Monoisopropanolamine is a colorless liquid with a slight ammonia like odor. It is used in plastics, paints, cutting oils, and specialized cleaning compounds. It is lighter than water and is insoluble in water. It is combustible and has a flash point of 165 deg. F. It is corrosive to metals and tissue. Its vapors are heavier than air. toxic oxides of nitrogen are produced during combustion of this material

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Build dikes to contain flow as necessary

Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors

Keep upwind

Avoid bodily contact with the material

Wear boots, protective gloves, and goggles

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Wear self-contained breathing apparatus when fighting fires involving this material

If contact with the material anticipated, wear full protective clothing

MONOMETHYLAMINE, ANHYDROUS

4905530

FLAMMABLE GAS

UN1061

ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Methylamine, anhydrous is a colorless gas with a fish-like odor at low concentration having ammonia-like odor at higher concentrations. It is used to make other chemicals, as a solvent, in paint removers, and for many other uses. It is shipped as a liquefied gas under its vapor pressure. Contact with the liquid can cause frostbite or chemical type burns. The gas itself is corrosive and it is soluble in water to form flammable corrosive solutions. It is easily ignited. Its vapors are heavier than air and a flame can flash back to the source of leak very easily. It can asphyxiate by the displacement of air. Under fire conditions the cylinders or tank cars may violently rupture and rocket. Toxic oxides of nitrogen are produced during combustion of this material.

It weighs 5.5 pounds per gallon.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped

Use water in flooding quantities as fog

Cool all affected containers with flooding quantities of water

Apply water from as far a distance as possible

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away

Keep material out of water sources and sewers

Attempt to stop leak if without hazard

Use water spray to knock-down vapors

Personnel protection

Avoid breathing vapors

Keep upwind

Wear self-contained breathing apparatus

Wear full protective clothing

Do not handle broken packages without protective equipment

Wash away any material which may have contacted the body with copious amounts of water or soap and water

Approach fire with caution

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 2500 feet

If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material

Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete

Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents

Neutralize with sodium bisulfate (nahso4)

Environmental considerations—water spill

Use natural barriers or oil spill control booms to limit spill motion

Use surface active agent (e.g. detergent, soaps, alcohols) to compress and thicken spilled material

Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms

If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration

Add sodium bisulfate

Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors

Vapor knockdown water is corrosive or toxic and should be diked for containment

MONOMETHYLAMINE, AQUEOUS SOLUTION 4907840
FLAMMABLE LIQUID, CORROSIVE, BASIC UN1235
ENVIRONMENTALLY HAZARDOUS SUBSTANCE (RQ-1000/454)

Monomethylamine, aqueous solution is the solution of monomethylamine, a gas, in water and has an odor ranging from fish-like to ammonia-like as the vapor concentration increases. It has a flash point less than 100 deg. F. It is corrosive to skin and eyes. The solution is lighter than water and soluble in water. Its vapors are heavier than air. Toxic oxides of nitrogen are produced during combustion of this material. It weighs 7.4 pounds per gallon.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
Use water spray to absorb vapors

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

Dig a pit, pond, lagoon, holding area to contain liquid or solid material
Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents
Apply "universal" gelling agent to immobilize spill
Neutralize with sodium bisulfate (nahso4)

Environmental considerations—water spill

Add sodium bisulfate
If dissolved, apply activated carbon at ten times the spilled amount in region of 10ppm or greater concentration
Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates

Environmental considerations—air spill

Apply water spray or mist to knock down vapors
Vapor knockdown water is corrosive or toxic and should be diked for containment

MORPHOLINE 4907846
FLAMMABLE LIQUID, CORROSIVE UN2054

Morpholine is a colorless liquid with a fish-like odor. It is used to make other chemicals, as a corrosion inhibitor, and in detergents. It has a flash point of 100 deg. F. It is corrosive to metals and tissue. It is lighter than water and is soluble in water. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective

Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Use "alcohol" foam, carbon dioxide or dry chemical
If material not on fire and not involved in fire
Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary
Attempt to stop leak if without hazard
Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear full protective clothing
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
If material leaking (not on fire), downwind evacuation must be considered

MORPHOLINE, AQUEOUS MIXTURE 4935668
CORROSIVE MATERIAL NA1760

Morpholine, aqueous mixture is a colorless liquid with a fish-like odor dissolved in water. It is used to make other chemicals, as a corrosion inhibitor, and in detergents. It is corrosive to metals and tissue. It will burn though it may require some effort to ignite. Its vapors are heavier than air.

If material on fire or involved in fire

Do not extinguish fire unless flow can be stopped
Use water in flooding quantities as fog
Solid streams of water may be ineffective
Cool all affected containers with flooding quantities of water
Apply water from as far a distance as possible
Solid streams of water may be ineffective
Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

Keep sparks, flames, and other sources of ignition away
Keep material out of water sources and sewers
Build dikes to contain flow as necessary

Personnel protection

Avoid breathing vapors
Keep upwind
Avoid bodily contact with the material
Wear boots, protective gloves, and goggles
Do not handle broken packages without protective equipment
Wash away any material which may have contacted the body with copious amounts of water or soap and water
Wear self-contained breathing apparatus when fighting fires involving this material
If contact with the material anticipated, wear full protective clothing

MORPHOLINE, AQUEOUS MIXTURE 4907847
FLAMMABLE LIQUID, CORROSIVE NA2054

Morpholine, aqueous mixture is a colorless liquid with a fish-like odor dissolved in water. It is used to make other chemicals, as a corrosion inhibitor, and in detergents. It is corrosive to metals and tissue. It has a flash point of 100 deg. F. Its vapors are heavier than air.

Continued on next page

If material on fire or involved in fire

- Use water in flooding quantities as fog
- Do not extinguish fire unless flow can be stopped
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to disperse vapors and dilute standing pools of liquid

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water
- Wear self-contained breathing apparatus when fighting fires involving this material

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

**MORTAR STAIN, LIQUID
COMBUSTIBLE LIQUID**

4915230
UN1263

Mortar stain, liquid may be formulated with a flammable solvent which has a flash point between 100 and 199 deg. F. The hazard is combustibility.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**MORTAR STAIN, LIQUID
FLAMMABLE LIQUID**

4910230
UN1263

Mortar stain, liquid may be formulated with a flammable solvent which has a flash point below 100 deg. F. The hazard is flammability.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective

- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use "alcohol" foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear boots, protective gloves, and goggles
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

**MOTOR FUEL ANTICKNOCK COMPOUND (OR)
ANTICKNOCK COMPOUND (THESE MATERIALS
MAY CONTAIN VARIOUS HAZARDOUS
SUBSTANCE FOR WHICH THE APPROPRIATE HQ
APPLIES)**

4921445

POISON B

UN1649

ENVIRONMENTALLY HAZARDOUS SUBSTANCE

Motor fuel antiknock compound is a variable colored liquid with a mildly pungent sweet odor. It is also a flammable or combustible liquid. It is heavier than water and insoluble in water. It is toxic by inhalation and by skin absorption. Prolonged exposure of the material to fire or heat can result in the spontaneous decomposition of the material. If the decomposition takes place inside a container, the container may violently rupture and rocket.

It weighs 13.8 pounds per gallon.

If material on fire or involved in fire

- Do not extinguish fire unless flow can be stopped
- Use water in flooding quantities as fog
- Solid streams of water may be ineffective
- Cool all affected containers with flooding quantities of water
- Apply water from as far a distance as possible
- Use foam, carbon dioxide or dry chemical

If material not on fire and not involved in fire

- Keep sparks, flames, and other sources of ignition away
- Keep material out of water sources and sewers
- Build dikes to contain flow as necessary
- Attempt to stop leak if without hazard
- Use water spray to knock-down vapors

Personnel protection

- Avoid breathing vapors
- Keep upwind
- Wear self-contained breathing apparatus
- Avoid bodily contact with the material
- Wear full protective clothing
- Do not handle broken packages without protective equipment
- Wash away any material which may have contacted the body with copious amounts of water or soap and water

Evacuation

- If fire becomes uncontrollable or container is exposed to direct flame—evacuate for a radius of 1500 feet
- If material leaking (not on fire), downwind evacuation must be considered

Environmental considerations—land spill

- Dig a pit, pond, lagoon, holding area to contain liquid or solid material
- Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete
- Absorb bulk liquid with fly ash, cement powder, sawdust, or commercial sorbents