Material Safety Data Sheet

conoco

Emergency Medical Telephone (800) 441-3637

CDR® FLOW IMPROVER

CP004

I. MATERIAL IDENTIFICATION

Name
CDR® Flow Improver

CAS Registry Number
Mixture; See Section XI

Synonyms
Polyolefin in Hydrocarbon Solvent

Product Codes
102M, 102S, 102R, 132, 162, 220, 230

Chemical Family
Petroleum Hydrocarbons

Transportation Emergency Phone
1-(800) 424-9300 (Chemtrec)

II. OSHA HAZARD DETERMINATION

The material is hazardous as defined by OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Refer to Section XI of this MSDS for other federal and state regulatory information.

Hazardous Ingredients	CAS Registry Number	Concentration
Petroleum Hydrocarbons	Mixture	> 90%

Hazardous Physical Properties
Class IIIA Combustible Liquid - NFPA Code 30-1987.

III. PHYSICAL DATA

Appearance and Odor
Opaque, amber to light green liquid;
Hydrocarbon solvent odor

Specific Gravity (H_2O = 1)
0.80 - 0.83

Boiling Point/Range
346° - 510°F ASTM D-86

Solubility in Water
Nil

IV. REACTIVITY DATA

Stable: X **Unstable:** ___

Conditions to Avoid: Store away from gases, heat, or flame.

SAL 000009337

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SHEA 001313

V. FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method used): >142°F ASTM D-3828-81 (Method A--Seta Flash Method)

Handle and store in accordance with NFPA procedure for Class IIIA Combustible Liquid.

Extinguishing Media: Use water spray, dry chemical, CO_2, foam.

Special Fire Fighting Procedures: Does not flow well even in spill/fire situation. Water or foam may cause frothing. Use water to keep fire-exposed containers cool. Water spray may be used to flush spills away from exposures.

Unusual Fire and Explosion Hazards: Dense black smoke produced. Products of combustion may contain carbon monoxide, carbon dioxide and other toxic materials. Do not enter enclosed or confined space without proper protective equipment including respiratory protection.

National Fire Protection Association (NFPA) Classification	HAZARD RATING
Health 0 Fire 2 Reactivity 0	Least-0 Slight-1 Moderate-2 High-3 Extreme-4

VI. TRANSPORTATION AND STORAGE

Storage Conditions: Store in accordance with National Fire Protection Association regulations. Store away from heat or open flame.

Shipping Information:

DOT:

Proper Shipping Name:	Petroleum Oil
Hazard Class:	Combustible Liquid
UN/NA No.:	NA 1270
DOT Label(s):	None
DOT Placard:	Combustible
IATA/IMO:	Not Restricted

VII. HEALTH HAZARD INFORMATION

Exposure Limits for CDR® Flow Improver

PEL: None Established TLV: None Established

Exposure Limits for Petroleum Distillates

PEL: 400 ppm; 1600 mg/m³ TLV: None Established

Primary Routes of Exposure/Entry: Skin, Inhalation.

Signs and Symptoms of Exposure/Medical Conditions Aggravated by Exposure:
Studies with mice or rats have shown that some petroleum distillates have caused either damage or tumors of the kidneys or tumors of the liver. However, kidney effects were not seen in similar studies involving guinea pigs, dogs or monkeys. Also, the significance of the liver tumors in rodents is highly speculative.

Mouse skin painting studies have shown that petroleum middle distillates (boiling range of 100°-700°F; naphtha, jet fuel, diesel fuel, kerosene, etc.) can cause skin cancer when repeatedly applied and never washed from the animal's skin. The relative significance of this to human health is uncertain since the petroleum distillates were not washed from the skin and resulting skin effects (irritation, cell damage, etc.) may play a role in the tumorigenic response. A few studies have shown that washing the animal's skin with soap and water between treatments greatly reduces the carcinogenic effect of some petroleum oils.

Extreme exposure or aspiration into the lungs may cause pneumonia. Overexposure may cause weakness, headache, nausea, confusion, blurred vision, drowsiness, and other nervous system effects; greater exposure may cause dizziness, slurred speech, flushed face, unconsciousness, or convulsions.

The product contains petroleum hydrocarbons, and as with many petroleum products, it may cause irritation to the eyes, skin or lungs after prolonged or repeated exposure.

Carcinogenicity:
This material is not known to contain any chemical listed as a carcinogen or suspected carcinogen by OSHA, IARC, or NTP at a concentration greater than 0.1%.

VIII. EMERGENCY AND FIRST AID INFORMATION

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

Skin: In case of contact, immediately wash skin with soap and plenty of water. Remove contaminated clothing as soon as possible. If irritation develops, consult a physician.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion: If swallowed, do not induce vomiting. Give large quantities of water. Never give anything by mouth to an unconscious person. Call a physician.

Notes to Physician: Gastric lavage by qualified medical personnel may be considered, depending on quantity of material ingested.

IX. SPILL, LEAK AND DISPOSAL INFORMATION

In Case of Spill or Leak: This material is combustible. Contain spill immediately in smallest possible area. Recover as much of the product as possible by such methods as vacuuming, followed by recovering residual fluids by using absorbent materials. Nonrecoverable product, contaminated soil, debris, and other materials should be placed in proper containers for ultimate disposal. Avoid washing, draining or directing material to storm or sanitary sewers.

NOTE: Review FIRE AND EXPLOSION HAZARDS before proceeding with clean up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean up.

Waste Disposal Method: Recycle as much of the recoverable product as possible. Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

X. PRECAUTIONARY MEASURES

Respiratory Protection: None normally required except in emergencies or when conditions cause excessive airborne levels of mists or vapors. Select appropriate NIOSH-approved respiratory protection where necessary to maintain exposures below the acceptable limits in Section VII. Proper respirator selection should be determined by adequately trained personnel and based on the contaminant(s), the degree of potential exposure and published respiratory protection factors.

Ventilation: Mechanical ventilation required only in emergency or extreme conditions, such as confined space.

Protective Gloves: Should be worn when the potential exists for prolonged or repeated skin exposure. NBR or neoprene recommended.

Eye Protection: Chemical splash goggles or face shield for sprays/mists or if splashing is probable.

Other Protective Equipment: Coveralls with long sleeves if splashing is probable. Launder contaminated clothing before reuse. Extremely contaminated leather shoes should be discarded.

XI. REGULATORY INFORMATION

FEDERAL REGULATIONS

CERCLA, 40 CFR 302
Not Applicable

SAL 000009339

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986, TITLE III SECTIONS 302, 304, 311, 312, 313

SECTION 302/304 - Extremely Hazardous Substances (40 CFR 355)
The material does not contain extremely hazardous substances at greater than 1.0% concentration; however, it is possible that this material may contain extremely hazardous substances at a lower concentration so that a large enough spill could warrant an Emergency Release Report under Section 304.

SECTION 311/312 - MSDS and Chemical Inventory Reporting Requirements (40 CFR 370)
The material should be reported under the following EPA hazard categories:

x Immediate (Acute) Health Hazard	__ Sudden Release of Pressure
x Delayed (Chronic) Health Hazard	__ Reactive
x Fire	__ Not Applicable

NOTE: See Section II for the concentration of any ingredients classified as hazardous by OSHA.

SECTION 313 - List of Toxic Chemicals (40 CFR 372)
The material does not contain chemical(s) at a level of 1.0% or greater (0.1% for carcinogens) on the list of Toxic Chemicals and subject to toxic chemical release reporting requirements.

TOXIC SUBSTANCES CONTROL ACT (TSCA), 40 CFR 710
This material is a mixture as defined by TSCA. The chemical ingredients in this material are in Section 8(b) Chemical Substance Inventory and/or are otherwise in compliance with TSCA. In the case of ingredients obtained from other manufacturers, Conoco relies on the assurance of responsible third parties in providing this statement.

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261, SUBPART C AND D
The material, when discarded or disposed of, is not specifically listed as a hazardous waste in Federal regulations; however, it could be considered hazardous if it meets criteria for being toxic, corrosive, ignitable or reactive according to U.S. EPA definitions (40 CFR 261). Additionally, it could be designated as hazardous according to state regulations. This material could also become a hazardous waste if it is mixed with or comes in contact with a listed hazardous waste. If such contact or mixing occurs, check 40 CFR 261 to determine whether it is a hazardous waste. If it is a hazardous waste, regulations 40 CFR 262, 263, 264 and 268 may apply.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 116.4A, SECTION 311
The material contains the following ingredient(s) which is considered hazardous if spilled in navigable waters.

Ingredient	Reportable Quantity
Petroleum Hydrocarbon	Film or sheen upon or discoloration of the water surface or adjoining shoreline

HAZARDOUS MATERIALS TRANSPORTATION REGULATIONS, 49 CFR 171-178
Not Applicable

FOREIGN REGULATION

CANADIAN HAZARDOUS PRODUCTS ACT (WHMIS)
The material is a WHMIS Controlled Product and a Canadian MSDS is available.

STATE REGULATIONS

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986 ("PROPOSITION 65")

The material does not contain ingredient(s) subject to the Act.

PENNSYLVANIA WORKER AND COMMUNITY RIGHT TO KNOW ACT

The material contains the following hazardous substances:

Categories: H = Hazardous Substance (≥ 1.0%)
S = Special Hazardous Substance (≥ 0.01%)
E = Environmental Hazard (≥ 1.0%)

Ingredient	CAS Registry Number	Category
Petroleum Distillates	Mixture	H

Nonhazardous ingredient(s) information is withheld as trade secret in accordance with Section 11 of Pennsylvania Worker and Community Right to Know Act.

MSDS Code: CSPI0170

SECTIONS OF MSDS REVISED:	I, VII
DATE OF LATEST REVISION/REVIEW:	1/90 - Replaces MSDS dated 3/89
DEPARTMENT RESPONSIBLE FOR MSDS:	Safety, Occupational Health & Environmental Affairs
PRODUCT INFORMATION CONTACT:	Hazard Communication Analyst Conoco Inc. (713) 293-5550

Material Safety Data Sheet

conoco

Emergency Medical Telephone (800) 441-3637

CDR® FLOW IMPROVER

CP004

I. MATERIAL IDENTIFICATION

Name
CDR® Flow Improver

CAS Registry Number
Mixture; See Section XI

Synonyms
Polyolefin in Hydrocarbon Solvent

Product Codes
102M, 102S, 102R, 132, 162, 220, 230

Chemical Family
Petroleum Hydrocarbons

Transportation Emergency Phone
1-(800) 424-9300 (Chemtrec)

II. OSHA HAZARD DETERMINATION

The material is hazardous as defined by OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Refer to Section XI of this MSDS for other federal and state regulatory information.

Hazardous Ingredients	CAS Registry Number	Concentration
Petroleum Hydrocarbons	Mixture	> 90%

Hazardous Physical Properties
Class IIIA Combustible Liquid - NFPA Code 30-1987.

III. PHYSICAL DATA

Appearance and Odor
Opaque, amber to light green liquid;
Hydrocarbon solvent odor

Specific Gravity (H_2O = 1)
0.80 - 0.83

Boiling Point/Range
346° - 510°F ASTM D-86

Solubility in Water
Nil

IV. REACTIVITY DATA

Stable: X **Unstable:** ___

Conditions to Avoid: Store away from gases, heat, or flame.

SAL 000009342

Conoco Inc., P.O. Box 2197, Houston, TX 77252
General Information No. (713) 293-5550

SHEA 001313

V. FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method used): >142°F ASTM D-3828-81 (Method A--Seta Flash Method)

Handle and store in accordance with NFPA procedure for Class IIIA Combustible Liquid.

Extinguishing Media: Use water spray, dry chemical, CO_2, foam.

Special Fire Fighting Procedures: Does not flow well even in spill/fire situation. Water or foam may cause frothing. Use water to keep fire-exposed containers cool. Water spray may be used to flush spills away from exposures.

Unusual Fire and Explosion Hazards: Dense black smoke produced. Products of combustion may contain carbon monoxide, carbon dioxide and other toxic materials. Do not enter enclosed or confined space without proper protective equipment including respiratory protection.

National Fire Protection Association (NFPA) Classification	HAZARD RATING
Health 0 Fire 2 Reactivity 0	Least-0 Slight-1 Moderate-2 High-3 Extreme-4

VI. TRANSPORTATION AND STORAGE

Storage Conditions: Store in accordance with National Fire Protection Association regulations. Store away from heat or open flame.

Shipping Information:

DOT:

Proper Shipping Name:	Petroleum Oil
Hazard Class:	Combustible Liquid
UN/NA No.:	NA 1270
DOT Label(s):	None
DOT Placard:	Combustible
IATA/IMO:	Not Restricted

VII. HEALTH HAZARD INFORMATION

Exposure Limits for CDR® Flow Improver

PEL: None Established TLV: None Established

Exposure Limits for Petroleum Distillates

PEL: 400 ppm; 1600 mg/m³ TLV: None Established

Primary Routes of Exposure/Entry: Skin, Inhalation.

Signs and Symptoms of Exposure/Medical Conditions Aggravated by Exposure:
Studies with mice or rats have shown that some petroleum distillates have caused either damage or tumors of the kidneys or tumors of the liver. However, kidney effects were not seen in similar studies involving guinea pigs, dogs or monkeys. Also, the significance of the liver tumors in rodents is highly speculative.

Mouse skin painting studies have shown that petroleum middle distillates (boiling range of 100°-700°F; naphtha, jet fuel, diesel fuel, kerosene, etc.) can cause skin cancer when repeatedly applied and never washed from the animal's skin. The relative significance of this to human health is uncertain since the petroleum distillates were not washed from the skin and resulting skin effects (irritation, cell damage, etc.) may play a role in the tumorigenic response. A few studies have shown that washing the animal's skin with soap and water between treatments greatly reduces the carcinogenic effect of some petroleum oils.

Extreme exposure or aspiration into the lungs may cause pneumonia. Overexposure may cause weakness, headache, nausea, confusion, blurred vision, drowsiness, and other nervous system effects; greater exposure may cause dizziness, slurred speech, flushed face, unconsciousness, or convulsions.

The product contains petroleum hydrocarbons, and as with many petroleum products, it may cause irritation to the eyes, skin or lungs after prolonged or repeated exposure.

Carcinogenicity:
This material is not known to contain any chemical listed as a carcinogen or suspected carcinogen by OSHA, IARC, or NTP at a concentration greater than 0.1%.

VIII. EMERGENCY AND FIRST AID INFORMATION

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

Skin: In case of contact, immediately wash skin with soap and plenty of water. Remove contaminated clothing as soon as possible. If irritation develops, consult a physician.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion: If swallowed, do not induce vomiting. Give large quantities of water. Never give anything by mouth to an unconscious person. Call a physician.

Notes to Physician: Gastric lavage by qualified medical personnel may be considered, depending on quantity of material ingested.

IX. SPILL, LEAK AND DISPOSAL INFORMATION

In Case of Spill or Leak: This material is combustible. Contain spill immediately in smallest possible area. Recover as much of the product as possible by such methods as vacuuming, followed by recovering residual fluids by using absorbent materials. Nonrecoverable product, contaminated soil, debris, and other materials should be placed in proper containers for ultimate disposal. Avoid washing, draining or directing material to storm or sanitary sewers.

NOTE: Review FIRE AND EXPLOSION HAZARDS before proceeding with clean up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean up.

Waste Disposal Method: Recycle as much of the recoverable product as possible. Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

X. PRECAUTIONARY MEASURES

Respiratory Protection: None normally required except in emergencies or when conditions cause excessive airborne levels of mists or vapors. Select appropriate NIOSH-approved respiratory protection where necessary to maintain exposures below the acceptable limits in Section VII. Proper respirator selection should be determined by adequately trained personnel and based on the contaminant(s), the degree of potential exposure and published respiratory protection factors.

Ventilation: Mechanical ventilation required only in emergency or extreme conditions, such as confined space.

Protective Gloves: Should be worn when the potential exists for prolonged or repeated skin exposure. NBR or neoprene recommended.

Eye Protection: Chemical splash goggles or face shield for sprays/mists or if splashing is probable.

Other Protective Equipment: Coveralls with long sleeves if splashing is probable. Launder contaminated clothing before reuse. Extremely contaminated leather shoes should be discarded.

XI. REGULATORY INFORMATION

FEDERAL REGULATIONS

CERCLA, 40 CFR 302
Not Applicable

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986, TITLE III SECTIONS 302, 304, 311, 312, 313

SECTION 302/304 - Extremely Hazardous Substances (40 CFR 355)
The material does not contain extremely hazardous substances at greater than 1.0% concentration; however, it is possible that this material may contain extremely hazardous substances at a lower concentration so that a large enough spill could warrant an Emergency Release Report under Section 304.

SECTION 311/312 - MSDS and Chemical Inventory Reporting Requirements (40 CFR 370)
The material should be reported under the following EPA hazard categories:

x Immediate (Acute) Health Hazard	__ Sudden Release of Pressure
x Delayed (Chronic) Health Hazard	__ Reactive
x Fire	__ Not Applicable

NOTE: See Section II for the concentration of any ingredients classified as hazardous by OSHA.

SECTION 313 - List of Toxic Chemicals (40 CFR 372)
The material does not contain chemical(s) at a level of 1.0% or greater (0.1% for carcinogens) on the list of Toxic Chemicals and subject to toxic chemical release reporting requirements.

TOXIC SUBSTANCES CONTROL ACT (TSCA), 40 CFR 710
This material is a mixture as defined by TSCA. The chemical ingredients in this material are in Section 8(b) Chemical Substance Inventory and/or are otherwise in compliance with TSCA. In the case of ingredients obtained from other manufacturers, Conoco relies on the assurance of responsible third parties in providing this statement.

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261, SUBPART C AND D
The material, when discarded or disposed of, is not specifically listed as a hazardous waste in Federal regulations; however, it could be considered hazardous if it meets criteria for being toxic, corrosive, ignitable or reactive according to U.S. EPA definitions (40 CFR 261). Additionally, it could be designated as hazardous according to state regulations. This material could also become a hazardous waste if it is mixed with or comes in contact with a listed hazardous waste. If such contact or mixing occurs, check 40 CFR 261 to determine whether it is a hazardous waste. If it is a hazardous waste, regulations 40 CFR 262, 263, 264 and 268 may apply.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 116.4A, SECTION 311
The material contains the following ingredient(s) which is considered hazardous if spilled in navigable waters.

Ingredient	Reportable Quantity
Petroleum Hydrocarbon	Film or sheen upon or discoloration of the water surface or adjoining shoreline

HAZARDOUS MATERIALS TRANSPORTATION REGULATIONS, 49 CFR 171-178
Not Applicable

FOREIGN REGULATION

CANADIAN HAZARDOUS PRODUCTS ACT (WHMIS)
The material is a WHMIS Controlled Product and a Canadian MSDS is available.

STATE REGULATIONS

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986 ("PROPOSITION 65")

The material does not contain ingredient(s) subject to the Act.

PENNSYLVANIA WORKER AND COMMUNITY RIGHT TO KNOW ACT

The material contains the following hazardous substances:

Categories: H = Hazardous Substance (≥ 1.0%)
S = Special Hazardous Substance (≥ 0.01%)
E = Environmental Hazard (≥ 1.0%)

Ingredient	CAS Registry Number	Category
Petroleum Distillates	Mixture	H

Nonhazardous ingredient(s) information is withheld as trade secret in accordance with Section 11 of Pennsylvania Worker and Community Right to Know Act.

MSDS Code: CSPI0170

SECTIONS OF MSDS REVISED:	I, VII
DATE OF LATEST REVISION/REVIEW:	1/90 - Replaces MSDS dated 3/89
DEPARTMENT RESPONSIBLE FOR MSDS:	Safety, Occupational Health & Environmental Affairs
PRODUCT INFORMATION CONTACT:	Hazard Communication Analyst Conoco Inc. (713) 293-5550

Material Safety Data Sheet

conoco

Emergency Medical Telephone (800) 441-3637

COKER GAS OIL - HEAVY PREMIUM/INTERMEDIATE/LSR CP017

I. MATERIAL IDENTIFICATION

Name	CAS Registry Number	Transportation Emergency Phone
Coker Gas Oil - Heavy Premium/Intermediate/LSR	64741-81-7	1-(800) 424-9300 (Chemtrec)

Chemical Family
Thermally Cracked Petroleum Hydrocarbon

Product Code
0542/0543/0544

II. OSHA HAZARD DETERMINATION

The material is hazardous as defined by OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Refer to Section XI of this MSDS for other federal and state regulatory information.

Hazardous Ingredients	CAS Registry Number	Concentration
Polynuclear Aromatic Hydrocarbons, i.e., benzo(a)pyrene	Mixture	5 - 50%

Hazardous Physical Properties
None

III. PHYSICAL DATA

Appearance and Odor
Brownish-green liquid; Cracked hydrocarbon odor

Specific Gravity
1.1

Boiling Point
500° - 1000°F

% Volatiles (by volume)
0

Vapor Pressure
Nil

Solubility in Water
Insoluble

Vapor Density
> 1

IV. REACTIVITY DATA

Stable: X **Unstable:** ___

Hazardous Decomposition Materials: Normal combustion forms carbon dioxide; incomplete combustion may form carbon monoxide.

Conditions to Avoid: Strong oxidizing materials, heat, flame.

Hazardous Polymerization: Will not occur.

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V. FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method used): > 200°F (TCC)

Handle and store in accordance with NFPA procedure for Class IIIB Combustible Liquid.

Extinguishing Media: Use water spray, dry chemical, CO_2, foam.

Special Fire Fighting Procedures: Water or foam may cause frothing. Use water to keep fire-exposed containers cool. Water spray may be used to flush spills away from exposures.

Unusual Fire and Explosion Hazards: Products of combustion may contain carbon monoxide, carbon dioxide and other toxic materials. Do not enter enclosed or confined space without proper protective equipment including respiratory protection.

National Fire Protection Association (NFPA) Classification	HAZARD RATING
Health 0 Fire 1 Reactivity 0	Least-0 Slight-1 Moderate-2 High-3 Extreme-4

VI. TRANSPORTATION AND STORAGE

Storage Conditions: Store in accordance with National Fire Protection Association regulations.

Shipping Information:
DOT: Not Regulated
IATA/IMO: Not Restricted

VII. HEALTH HAZARD INFORMATION

Exposure Limits for Material

PEL: None Established*
TLV: None Established*
Du Pont AEL: None Established
Ceiling Value: None Established

*Refer to Coal Tar Pitch Volatiles; 0.2 mg/m³

Primary Routes of Exposure/Entry: Skin, Inhalation.

Signs and Symptoms of Exposure/Medical Conditions Aggravated by Exposure:
Mouse skin painting studies have shown that nonsolvent-refined petroleum distillates having a distillation end-point above 700°F, and which are similar to ingredients in this product, caused skin tumors. This animal data should be interpreted cautiously since these studies involved repeated exposure of shaved skin which was never washed free of test material; the resulting skin effects (irritation, cell damage, etc.) may play a role in the tumorigenic response. Also, limited studies of carcinogenic oils have shown that washing the animals' skin with soap and water between applications greatly reduces tumor formation. These studies demonstrate the effectiveness of cleansing the skin after contact. The product may contain polynuclear aromatic hydrocarbons (PNAs) which have caused cancer involving skin and internal organs in laboratory animals. The product may product a phototoxic reaction when contaminated skin is exposed to sunlight. The effect is similar in appearance to an exaggerated sunburn and is temporary in duration.

The product contains petroleum hydrocarbons, and as with many petroleum products, it may cause irritation to the eyes, lungs or skin after prolonged or repeated exposure. Extreme exposure or aspiration into the lungs may cause pneumonia. Overexposure may cause weakness, headache, nausea, confusion, blurred vision, drowsiness and other nervous system effects; greater exposure may cause dizziness, slurred speech, flushed face, unconsciousness or convulsions.

Listed as Carcinogen or Potential Carcinogen by:

	NTP	IARC	OSHA
Polynuclear Aromatic Hydrocarbons, i.e., benzo(a)pyrene	Yes	Category 2B	No

VIII. EMERGENCY AND FIRST AID INFORMATION

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

Skin: In case of contact, immediately wash skin with soap and plenty of water. If irritation develops, consult a physician.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion: If swallowed, do not induce vomiting. Give large quantities of water. Never give anything by mouth to an unconscious person. Call a physician.

Notes to Physician: Gastric lavage by qualified medical personnel may be considered, depending on quantity of material ingested.

IX. SPILL, LEAK AND DISPOSAL INFORMATION

In Case of Spill or Leak: All sparks, flames and ignition sources must be restricted from the area. Contain spill immediately in smallest possible area. Recover as much of the product as possible by such methods as vacuuming, followed by recovering residual fluids by using absorbent materials. Nonrecoverable product, contaminated soil, debris and other materials should be placed in proper containers for ultimate disposal. Avoid washing, draining or directing material to storm or sanitary sewers.

NOTE: Review FIRE AND EXPLOSION HAZARDS before proceeding with clean up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean up.

Waste Disposal Method: Recycle as much of the recoverable product as possible. Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

X. PRECAUTIONARY MEASURES

Respiratory Protection: Select appropriate NIOSH-approved respiratory protection where necessary to maintain exposures below the acceptable limits in Section VII. Proper respirator selection should be determined by adequately trained personnel and based on the contaminant(s), the degree of potential exposure and published respiratory protection factors.

Ventilation: Normal ventilation.

Protective Gloves: Should be worn when any potential exists for skin contact. Use insulated gloves where material is being handled hot. NBR or neoprene recommended.

Eye Protection: Chemical goggles required when exposed to sprays and mists or if splashing is probable. Face shield is recommended where splashing can occur.

Other Precautions: Skin contact should be minimized. Complete protective clothing if material is being handled hot. Launder or discard contaminated clothing. Discard extremely contaminated leather material.

XI. REGULATORY INFORMATION

FEDERAL REGULATIONS

CERCLA, 40 CFR 302
Not Applicable

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986, TITLE III SECTIONS 302, 304, 311, 312, 313

SECTION 302/304 - Extremely Hazardous Substances (40 CFR 355)
The material does not contain extremely hazardous substances at greater than 1.0% concentration; however, it is possible that this material may contain extremely hazardous substances at a lower concentration so that a large enough spill could warrant an Emergency Release Report under Section 304.

SECTION 311/312 - MSDS and Chemical Inventory Reporting Requirements (40 CFR 370)
The material should be reported under the following EPA hazard categories:

__ Immediate (Acute) Health Hazard	__ Sudden Release of Pressure
_x_ Delayed (Chronic) Health Hazard	__ Reactive
__ Fire	__ Not Applicable

NOTE: See Section II for the concentration of any ingredients classified as hazardous by OSHA.

SECTION 313 - List of Toxic Chemicals (40 CFR 372)
The material is not known to contain chemical(s) at a level of 1.0% or greater (0.1% for carcinogens) on the list of Toxic Chemicals and subject to toxic chemical release reporting requirements.

TOXIC SUBSTANCES CONTROL ACT (TSCA), 40 CFR 710
This material is in the TSCA Inventory of Chemical Substances and/or is otherwise in compliance with TSCA.

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261, SUBPART C AND D
The material, when discarded or disposed of, is not specifically listed as a hazardous waste in Federal regulations; however, it could be considered hazardous if it meets criteria for being toxic, corrosive, ignitable or reactive according to the U.S. EPA definitions (40 CFR 261). Additionally, it could be designated as hazardous according to state regulations. This material could also become a hazardous waste if it is mixed with or comes in contact with a listed hazardous waste. If such contact or mixing occurs, check 40 CFR 261 to determine whether it is a hazardous waste. If it is a hazardous waste, regulations 40 CFR 262, 263, 264 and 268 may apply.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 116.4A, SECTION 311
The material contains the following ingredient(s) which is considered hazardous if spilled in navigable waters.

Ingredient	Reportable Quantity
Petroleum Hydrocarbon	Film or sheen upon or discoloration of the water surface or adjoining shoreline

HAZARDOUS MATERIALS TRANSPORTATION REGULATIONS, 49 CFR 171-178
Not Applicable

STATE REGULATIONS

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986 ("PROPOSITION 65")
The material contains ingredient(s) known to the State of California to cause cancer, birth defects or other reproductive harm. Read and follow label directions and use care when handling or using all petroleum products.

Ingredient
Polynuclear Aromatic Hydrocarbons, i.e., Benzo(a)pyrene

PENNSYLVANIA WORKER AND COMMUNITY RIGHT TO KNOW ACT
To the best of our knowledge the material is not sold or produced in Pennsylvania. Please notify us at the telephone number noted below if the material results in Pennsylvania commerce.

MSDS Code: GASC0156	
SECTIONS OF MSDS REVISED:	I, II, VII
DATE OF LATEST REVISION/REVIEW:	2/90 - Replaces MSDS dated 3/89
DEPARTMENT RESPONSIBLE FOR MSDS:	Safety, Occupational Health, & Environmental Affairs
PRODUCT INFORMATION CONTACT:	Hazard Communication Analyst Conoco Inc. (713) 293-5550

The above data are based on tests, experience, and other information which Conoco believes reliable and are supplied for informational purposes only. However, some ingredients may have been purchased or obtained from third-party manufacturers. In these instances, Conoco, in good faith relies on information provided by those third parties. Since conditions of use are outside our control, CONOCO DISCLAIMS ANY LIABILITY FOR DAMAGE OR INJURY WHICH RESULTS FROM THE USE OF THE ABOVE DATA. NOTHING CONTAINED HEREIN SHALL CONSTITUTE A GUARANTEE, WARRANTY (INCLUDING WARRANTY OF MERCHANTABILITY) OR REPRESENTATION (INCLUDING FREEDOM FROM PATENT LIABILITY) BY CONOCO WITH RESPECT TO THE DATA, THE MATERIAL DESCRIBED, OR ITS USE FOR ANY SPECIFIC PURPOSE, EVEN IF THAT PURPOSE IS KNOWN TO CONOCO.

Material Safety Data Sheet

conoco

Emergency Medical Telephone (800) 441-3637

BENZENE

GS045

I. MATERIAL IDENTIFICATION

Name
Benzene

CAS Registry Number
71-43-2

Synonyms
Benzol, Coal Naphtha, Cyclohexatriene, Phene, Phenyl Hydride, Pyrobenzol

Transportation Emergency Phone
1-(800) 424-9300 (Chemtrec)

Chemical Family
Monocyclic Aromatic Hydrocarbon

II. OSHA HAZARD DETERMINATION

The material is hazardous as defined by OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Refer to Section XI of this MSDS for other federal and state regulatory information.

Hazardous Ingredients	CAS Registry Number	Concentration
Benzene	71-43-2	>99%

Hazardous Physical Properties
Class IB Flammable Liquid - NFPA Code 30-1987.

III. PHYSICAL DATA

Appearance and Odor
Colorless liquid;
Sweet odor (Threshold: 2 ppm)

Specific Gravity (H_2O = 1)
0.884

Boiling Point @ 760 mmHg
80.1°C (176.18°F)

% Volatiles (WT %)
100%

Vapor Pressure (mmHg)
77 @ 21°C (69°F)
100 @ 26.1°C (78°F)

Solubility in Water
Negligible

Vapor Density (Air = 1.0)
2.8

Melting Point
5.5°C (41.9°F)

IV. REACTIVITY DATA

Stable: X **Unstable:** ___

Hazardous Decomposition Materials: Decomposes with heat.

Conditions to Avoid: Incompatible with strong oxidants, strong acids.

Hazardous Polymerization: Will not occur.

Conoco Inc., P.O. Box 2197, Houston, TX 77252
General Information No. (713) 293-5550

V. FIRE AND EXPLOSION HAZARD DATA

LEL: 1.3 UEL: 7.9

Flash Point (Method used): -11°C (12°F) (CC)

Autoignition Temperature: 560°C (1,040°F)

Handle and store in accordance with NFPA procedure for Class IB Flammable Liquid.

Extinguishing Media: Use foam, dry chemical, CO_2.

Special Fire Fighting Procedures: Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus. Wear full protective equipment. Cool tank/container with water spray.

If a leak or spill has not ignited, use water spray to disperse the vapors and to protect those attempting to stop a leak. Water spray may be used to flush spills away from exposures.

Unusual Fire and Explosion Hazards: Vapor forms explosive mixture with air. Vapors or gases may travel considerable distances to ignition source and flash back. Hazardous vapor produced in fire is carbon monoxide.

National Fire Protection Association (NFPA) Classification	HAZARD RATING
Health 2 Fire 3 Reactivity 0	Least-0 Slight-1 Moderate-2 High-3 Extreme-4

VI. TRANSPORTATION AND STORAGE

Storage Conditions: Store in well ventilated area. Store in cool place. Keep container tightly closed. Do not store with strong oxidants.

Shipping Information:

DOT:		IATA/IMO:	
Proper Shipping Name:	Benzene (Benzol)	**Proper Shipping Name:**	Benzene
Hazard Class:	Flammable Liquid	**Hazard Class:**	3.2
UN/NA No.:	UN 1114	**UN No.:**	UN 1114
DOT Label(s):	Flammable Liquid	**IMO/ICAO Label:**	Flammable Liquid
DOT Placard:	Flammable	**Packaging Group:**	II

Reportable Quantity: 10 lbs.
If material is shipped in quantities greater than 10 lbs. per container, the Proper Shipping Name is RQ Benzene.

VII. HEALTH HAZARD INFORMATION

Exposure Limits for Benzene

PEL: 1 ppm - 8 Hr. TWA
5 ppm - (Short-Term Exposure Limit)
0.5 ppm - Action Level

TLV: 10 ppm, 32 mg/m^3
Du Pont AEL: 1 ppm - 8 & 12 Hr. TWA
5 ppm - 15 Min. TWA

Hazardous Materials Identification System (HMIS) Ratings	HAZARD RATING
Health 2 Fire 3 Reactivity 0	Least-0 Slight-1 Moderate-2

Primary Routes of Exposure/Entry: Skin, Inhalation.

Signs and Symptoms of Exposure/Medical Conditions Aggravated by Exposure:
A few studies have indicated that workers exposed many years to high concentrations of benzene have a slightly higher incidence of leukemia. Benzene can also be toxic to the blood and blood-forming tissues. High exposures may also cause heart irregularities with sudden death.

Benzene may cause irritation to the eyes, lungs, or skin after prolonged or repeated exposure.

Overexposure may cause weakness, headache, nausea, confusion, blurred vision, drowsiness, and other nervous system effects; greater exposure may cause dizziness, slurred speech, flushed face, unconsciousness, or convulsions.

Carcinogenicity:

	NTP	IARC	OSHA
Benzene	Yes	Yes	Yes

VIII. EMERGENCY AND FIRST AID INFORMATION

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion: If swallowed, do not induce vomiting. Immediately give two glasses of water or activated charcoal slurry. Never give anything by mouth to an unconscious person. Call a physician.

Notes to Physician: To prepare activated charcoal slurry, suspend 50 g activated charcoal in 400 ml water in plastic bottle and shake well. Administer 5 ml/kg or 350 ml for an average adult.

IX. SPILL, LEAK AND DISPOSAL INFORMATION

Aquatic Toxicity: 96 hour LC 50, fathead minnow: 35 mg/l

In Case of Spill or Leak: Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus. Remove source of heat, sparks, flame, impact, friction, or electricity. Dike spill. Prevent liquid from entering sewers, waterways, or low areas. Recover free liquid for reuse or reclamation. Soak up with sawdust, sand, oil dry, or other absorbent material.

Superfund Reportable Discharge: 1,000 lbs.

NOTE: Review FIRE AND EXPLOSION HAZARDS before proceeding with clean up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean up.

Waste Disposal Method: Cleaned-up material is an RCRA Hazardous Waste. Treatment, storage, transportation, and disposal must be in accordance with applicable federal, state/provincial, and local regulations. Recover nonusable free liquid and dispose of in an approved and permitted incinerator. Do not flush to surface water or sanitary sewer system.

X. PRECAUTIONARY MEASURES

Generally Applicable Control Measures and Procedures: Keep away from heat, sparks, and flames. Keep container in a cool place. Keep container tightly closed. Ground container when pouring. Use of nonsparking and explosion-proof equipment may be necessary depending on type of operation.

Use ventilation that is adequate to keep airborne concentrations below exposure limits.

Personal Protective Equipment: The OSHA benzene standard (29 CFR 1910.1028) has specific requirements for personal protective equipment including respiratory protection. Refer to OSHA Standard 29 CFR 1910.134 for further respirator requirements. Eye contact with liquid benzene must be prevented and skin exposure limited as much as possible. Eye and face protection must conform to OSHA Standard 1910.133.

Only personal protective clothing which provides a good barrier against benzene should be used. The best material against pure benzene is "VITON."

If liquid benzene contacts protective clothing, the clothing should be removed promptly and decontaminated.

Safety Precautions: Do not breathe vapor or mist. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Wash clothing after use.

XI. REGULATORY INFORMATION

FEDERAL REGULATIONS

CERCLA, 40 CFR 302
The material contains the following hazardous substance which, when released in quantities equal to or exceeding the Reportable Quantity, triggers National Response Center notification requirements.

Hazardous Substance	Reportable Quantity
Benzene	10 lbs.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986, TITLE III SECTIONS 302, 304, 311, 312, 313

SECTION 302/304 - Extremely Hazardous Substances (40 CFR 355)
The material is not known to contain extremely hazardous substances at greater than 1.0% concentration; however, it is possible that this material may contain extremely hazardous substances at a lower concentration so that a large enough spill could warrant an Emergency Release Report under Section 304.

SECTION 311/312 - MSDS and Chemical Inventory Reporting Requirements (40 CFR 370)
The material should be reported under the following EPA hazard categories:

x Immediate (Acute) Health Hazard	__ Sudden Release of Pressure
x Delayed (Chronic) Health Hazard	__ Reactive
x Fire	__ Not Hazardous

NOTE: See Section II for the concentration of any ingredients classified as hazardous by OSHA.

SECTION 313 - List of Toxic Chemicals (40 CFR 372)
The material contains the following chemical(s) at a level of 1.0% or greater (0.1% for carcinogens) on the list of Toxic Chemicals and is subject to toxic chemical release reporting requirements.

Toxic Chemical	CAS Registry Number	Approx. Concentration (Upper Bound)
Benzene	71-43-2	100%

TOXIC SUBSTANCES CONTROL ACT (TSCA), 40 CFR 710
This material is in the TSCA Inventory of Chemical Substances and/or is otherwise in compliance with TSCA.

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261, SUBPART C AND D
The material, when discarded or disposed of, is the listed hazardous waste U019.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 116.4A, SECTION 311
The material contains the following ingredient(s) which is considered hazardous if spilled in navigable waters.

Ingredient	Reportable Quantity
Benzene	10 lbs.

HAZARDOUS MATERIALS TRANSPORTATION REGULATIONS, 49 CFR 171-178
The material contains the following ingredient(s) which is considered hazardous if spilled while being transported in commerce.

Ingredient	Reportable Quantity
Benzene	10 lbs.

SAL 000009355

STATE REGULATIONS

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986 ("PROPOSITION 65")

The material contains ingredient(s) known to the State of California to cause cancer, birth defects or other reproductive harm. Read and follow label directions and use care when handling or using all petroleum products.

Ingredient
Benzene

PENNSYLVANIA WORKER AND COMMUNITY RIGHT TO KNOW ACT

To the best of our knowledge the material is not sold or produced in Pennsylvania. Please notify Conoco at the telephone number noted below if the material results in Pennsylvania commerce.

ADDITIONAL INFORMATION AND REFERENCES

The OSHA Benzene Standard, 29 CFR 1910.1028, must be complied with. Specific requirements include permissible exposure limits, regulated areas, exposure monitoring, engineering controls and work practices, medical surveillance and removal, communications and training, and record keeping. The standard became effective December 10, 1987.

MSDS Code: MISC0016	
SECTIONS OF MSDS REVISED:	VI, VII, XI
DATE OF LATEST REVISION/REVIEW:	5/90 - Replaces MSDS dated 5/90
DEPARTMENT RESPONSIBLE FOR MSDS:	Safety, Occupational Health & Environmental Affairs
PRODUCT INFORMATION CONTACT:	Hazard Communication Analyst Conoco Inc. (713) 293-5550

GS352

REQUIRED VENTILATION
LOCAL EXHAUST VENTILATION SUFFICIENT TO MAINTAIN WORKPLACE CONCENTRATION BELOW PERMISSIBLE EXPOSURE LIMITS.

RESPIRATORY PROTECTION
TYPICAL USE OF THE PRODUCT DOES NOT REQUIRE THE USE OF A RESPIRATOR. USE NIOSH APPROVED MASK IF MISTING. IN CASE OF AN EMERGENCY, THE FOLLOWING RESPIRATOR IS RECOMMENDED:
1000 PPM: CCROVF
5000 PPM: GMOV/SAF/SCBAF
10,000 PPM: SAF * PD,PP,CF
ESCAPE: GMOV/SCBA

PROTECTIVE GLOVES
NEOPRENE OR NITRILE RUBBER GLOVES SHOULD BE WORN IF REPEATED OR PROLONGED EXPOSURE IS ANTICIPATED.

EYE PROTECTION
CHEMICAL GOGGLES IF METHOD OF APPLICATION PRESENTS THE LIKELIHOOD OF EYE CONTACT

OTHER PROTECTION
N/A

SECTION X - STORAGE AND HANDLING INFORMATION

STORAGE TEMPERATURE 120 F.<--MAX 0 F<--MIN	INDOOR	HEATED	REFRIGERATED	OUTDOOR
	X			

PRECAUTIONS TO BE TAKEN IN HANDLING & STORING
STORE AT TEMPERATURES < 120 F. TO PREVENT POSSIBILITY OF RUPTURE.

OTHER PRECAUTIONS
KEEP OUT OF REACH OF CHILDREN. READ ENTIRE LABEL BEFORE USE. DELIBERATE CONCENTRATION AND INHALATION OF VAPORS CAN BE FATAL.

SECTION XI - REGULATORY INFORMATION

CHEMICAL NAME	C.A.S. NUMBER	UPPER % LIMIT
N/A		

THOSE INGREDIENTS LISTED ABOVE ARE SUBJECT TO THE REPORTING REQUIREMENTS OF 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF

1986 AND 40 CFR PART 372.
IF UE (USE EXEMPTION) APPEARS UNDER UPPER % LIMIT, END USERS ARE EXEMPT FROM NOTIFICATION BECAUSE THE PRODUCT IS USED AND LABELED FOR ROUTINE JANITORIAL WORK, OR THE PRODUCT IS USED AND LABELED FOR FACILITY GROUNDS MAINTENANCE (SUCH AS FERTILIZERS AND HERBICIDES), OR THE PRODUCT IS USED AND LABELED FOR MAINTAINING MOTOR VEHICLES.

SECTION XII - TRANSPORTATION * (FOR FUTURE USE)

APPLICABLE REGULATIONS
<--49 CFR <--IMCO <--TARIFF 6 D <--IATA <--MILITARY AIR (AFR 71-4)

SHIPPING NAME

HAZARD CLASS	ID NUMBER	REPORT QTY
LABELS	LIMITED QTY	

UNIT CONTAINER

DOT SPS CONTAINER	NET EXPLOSIVE WT.

AEROSOL PROPELLANT(S)

SECTION XIII - REFERENCES

1. VENDOR'S MSDS SHEET
2. NIOSH POCKET GUIDE TO CHEMICAL HAZARDS, 1978.
3. DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, 6TH EDITION, N. IRVING SAX
4. NIOSH REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, 1982.

* INGREDIENT PERCENTAGE IS A TRADE SECRET.
MASS TRADE SECRET NUMBER

MATERIAL SAFETY DATA SHEET : YIELD AEROSOL PAGE : 01

(090825-0189 -80161548-5068)

DATE OF ISSUE	SUPERSEDES
12/13/89	09/01/89

SECTION I - GENERAL INFORMATION

CHEMICAL NAME & SYNONYMS
N/A

TRADE NAME & SYNONYMS
YIELD AEROSOL

CHEMICAL FAMILY
ALIPHATIC PETROLEUM DISTILLATE

FORMULA
X<--MIXTURE

MANUFACTURERS NAME:
NATIONAL CHEMSEARCH DIV. OF NCH CORP.

ADDRESS (NUMBER, STREET, CITY, STATE & ZIP CODE)
BOX 152170
IRVING, TEXAS 75015

PREPARED BY:	PRODUCT CODE NUMBER	EMERGENCY TELEPHONE NUMBER
KEVIN UHL/T.S. CHEMIST	5068	214-438-1381

SECTION II- HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS AS THE PRODUCT MIXTURE HAS NOT BEEN TESTED AS A WHOLE.

CHEMICAL NAME (INGREDIENTS)	HAZARD	TLV*	PEL*	CAS#
ALIPHATIC PETROLEUM DIST. *	COMB.	NA	100PPM	8030-30-6
ETHYL ACETATE *	FLAMMABLE	400PPM	400PPM	141-78-6
* SEE SECTION XIII				
PROPANE	ASPHYXIANT	N/E	1000PPM	74-98-6
ISOBUTANE	FLAMM.	N/E	N/E	75-28-5

SECTION IIA - NON-HAZARDOUS INGREDIENTS

NON-HAZARDOUS INGREDIENT NAMES AND CAS NUMBERS ARE PROTECTED UNDER NJ TRADE SECRET REGISTRY # 409363-5050P

SECTION III - PHYSICAL DATA

BOILING PT.(FAHRENHEIT)	160	SPEC GRAVITY (H2O=1)	0.860
VAPOR PRESSURE (MM HG)	13.6	COLOR	AMBER
VAPOR DENSITY (AIR=1)	1.8	ODOR	SOLVENT
PH @ 100%	N/A	CLARITY	TRANSPARENT
PERCENT, VOLATILE BY VOLUME (%)	50	EVAPORATION RATE (BU AC = 1)	0.6
SOLUBILITY IN WATER	NEGLIGIBLE		
VISCOSITY	NON-VISCOUS		

SECTION IV - FIRE AND EXPLOSION HAZARD

FLASH POINT (METHOD USED)	FLAMMABLE LIMITS	LEL	UEL
80 F. T.C.C.		2.2	11.0

EXTINGUISHING MEDIA

"ALCOHOL" FOAM	FOAM	DRY CHEMICAL	CO2	WATER SPRAY	OTHER
X<--FOAM	<--FOAM	X<--CHEMICAL	X<--CO2	<--SPRAY	<--OTHER

SPECIAL FIRE FIGHTING PROCEDURES
SPRAY WATER ON AEROSOL CONTAINERS TO COOL THEM, AVOIDING RUPTURING. WEAR SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE WHEN FIGHTING FIRES.

UNUSUAL FIRE & EXPLOSION HAZARDS

VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL TO AREAS DISTANT FROM HANDLING POINT. FLAME EXTENSION: > 18" BURNBACK: 5 - 6 INCHES

LEVEL 3 AEROSOL (NFPA 30B)

NFPA HAZARD RATING (0=INSIGNIFICANT;1=SLIGHT;2=MODERATE;3=HIGH;4=EXTREME):

1 <--HEALTH	3 <--FLAMMABILITY	0 <--REACTIVITY	<--SPECIAL