



GASC0065

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CONDENSATE

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

CAS Number 64741-47-5

Tradenames and SynonymsCasinghead Gasoline
Natural Gasoline
0202, 0230**Company Identification**MANUFACTURER/DISTRIBUTOR
CONOCO INC.
P.O. BOX 2197
HOUSTON, TX 77252**PHONE NUMBERS**Product Information 1-713-293-5550
Transport Emergency CHEMTREC 1-800-424-9300
Medical Emergency 1-800-441-3637

COMPOSITION/INFORMATION ON INGREDIENTS

**Components
Material**

CAS Number %

Condensate 64741-47-5 100

containing:

Hydrocarbons (Aromatic & Paraffinic) >70

* Toluene 108-88-3 <15

* Xylenes 1330-20-7 <12

* Benzene 71-43-2 0.1-5

* Regulated as a Toxic Chemical under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1988 and 40 CFR part 372.

(Continued)

HAZARDS IDENTIFICATION

Potential Health Effects

Substance Information

Primary Routes of Entry: Skin, inhalation

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.

The product may cause irritation to the eyes, lungs, or skin after prolonged or repeated exposure. Extreme overexposure or aspiration into the lungs may cause lung damage or death. Overexposure may cause weakness, headache, nausea, confusion, blurred vision, drowsiness, and other nervous system effects; greater overexposure may cause dizziness, slurred speech, flushed face, unconsciousness, and convulsions.

Inhalation of xylene can cause nausea, headache, weakness, dizziness, confusion, incoordination, and loss of consciousness. Ingestion can cause gastrointestinal irritation and symptoms of central nervous system depression; aspiration into the lungs may be lethal. High exposures can cause skin, eye, nose, and throat irritation; heart stress; anemia; respiratory difficulties; bleeding from mucosal surfaces; liver and kidney effects; and death.

Remember that good hygienic practices can be helpful in preventing adverse health effects; for example, exposure to material and its fumes can be minimized by using protective clothing or devices while contaminated skin should be washed. Intermittent or occasional skin contact with the material is not expected to have serious health effects as long as good personal hygiene measures, such as those outlined in this material safety data sheet, are followed. The real risk for any chemical exposure is related to the degree of exposure.

Carcinogenicity Information

The following components are listed by IARC, NTP, OSHA or ACGIH as carcinogens. A "P" indicates a proposed carcinogen.

Material	IARC	NTP	OSHA	ACGIH
Benzene	X	X	X ₄	X

Du Pont controls the following materials as potential carcinogens:
Benzene.

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FIRST AID MEASURES

First Aid INHALATION

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

SKIN CONTACT

In case of contact, immediately wash skin with soap and water. Wash contaminated clothing before reuse.

If irritation develops, consult a physician.

EYE CONTACT

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

INGESTION

If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician.

Notes to Physicians

Activated charcoal mixture may be beneficial. Suspend 50 g activated charcoal in 400 mL water and mix well. Administer 5 mL/kg, or 350 mL for an average adult.

THIS MATERIAL MAY MAKE THE HEART MORE SUSCEPTIBLE TO ARRHYTHMIAS. Catecholamines such as adrenaline, and other compounds having similar effects, should be reserved for emergencies and then used only with special caution.

FIRE FIGHTING MEASURES

Flammable Properties

Flash Point	As low as -50 F
Method	PMCC
Flammable limits in Air, % by Volume	
LEL	< 1
UEL	10
Autoignition	As low as 450 F

Vapor forms explosive mixture with air. Vapors or gases may travel considerable distances to ignition source and flash back.

NFPA Classification Class IA Flammable Liquid.

Extinguishing Media

Foam, Dry Chemical, CO₂.

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FIRE FIGHTING MEASURES(Continued)

Fire Fighting Instructions

Water may be ineffective to extinguish, but water should be used to keep fire-exposed containers cool. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop a leak. Water spray may be used to flush spills away from areas of potential ignition.

Highly Flammable. 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.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Remove source of heat, sparks, flame, impact, friction and electricity including internal combustion engines and power tools. If equipment is used for spill cleanup, it must be explosion proof and suitable for flammable liquid and vapor.

NOTE: Vapors released from the spill may create an explosive atmosphere.

Initial Containment

Dike spill. Prevent material from entering sewers, waterways, or low areas.

Spill Clean Up

Soak up with sawdust, sand, oil dry or other absorbent material. Shovel or sweep up.

HANDLING AND STORAGE

Handling (Personnel)

Avoid breathing vapors or mist. Avoid contact with eyes, skin, or clothing. Wash thoroughly after handling. Wash clothing after use.

Handling (Physical Aspects)

Use of non-sparking and explosion-proof equipment may be necessary depending on type of operation. Keep away from heat, sparks and flames. Do not pressurize, cut, weld, braze, solder, grind, or drill on or near full or empty container. Empty container retains residue (liquid and/or vapor) and may explode in heat of a fire.

Storage

Store in accordance with National Fire Protection Association recommendations. Store away from heat, sparks and flames.

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EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Ventilation: Storage and use areas should be well ventilated. Use fans or blowers in enclosed areas.

Personal Protective Equipment

Respiratory Protection: A NIOSH/MSHA-approved, air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known or any other circumstances where air purifying respirators may not provide adequate protection.

Protective Gloves: Should be worn when any potential exists for skin contact. NBR or neoprene recommended.

Eye Protection: Goggles or face shield for spray/mists or if splashing is probable.

Other Protective Equipment: Coveralls are recommended if splashing is probable. Launder contaminated clothing before reuse.

Exposure Guidelines

Applicable Exposure Limits

Toluene			
PEL (OSHA)		200 ppm, 8 Hr. TWA	
		300 ppm, Ceiling	
		500 ppm - 10 Min. Max.	
TLV (ACGIH)		50 ppm, 188 mg/m ³ , 8 Hr. TWA, Skin	
BEI (ACGIH)	:		
Determinant	Sampling Time	BEI	Notation
Hippuric acid in urine	End of shift Last 4 hours of shift	2.5 g/g creatinine	B, Ns
Toluene in venous blood	End of shift	1 mg/L	Sq
Toluene in end exhaled air			Sq
AEL * (Du Pont)		100 ppm, 8 & 12 Hr. TWA	*
Xylenes			
PEL (OSHA)		100 ppm, 435 mg/m ³ , 8 Hr. TWA	
TLV (ACGIH)		100 ppm, 434 mg/m ³ , 8 Hr. TWA	
		STEL 150 ppm, 651 mg/m ³	
BEI (ACGIH)	:		

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EXPOSURE CONTROLS/PERSONAL PROTECTION(Continued)

Determinant	Sampling Time	BEI	Notation
Methylhippuric acids in urine AEL * (Du Pont)	End of shift	1.5 g/g creatinine 100 ppm, 8 Hr. TWA 150 ppm, 15 minute TWA	-
Benzene PEL (OSHA)		1 ppm, 8 Hr. TWA 5 ppm, STEL 0.5 ppm, Action Level	
TLV (ACGIH)		10 ppm, A2, 32 mg/m3, A2, 8 Hr. TWA Notice of Intended Changes (1993-1994) 0.1 ppm, 0.3 mg/m3, 8 Hr. TWA, Skin, A1	
BEI (ACGIH) Determinate	Sampling Time	BEI	Notation
Total phenol in urine	End of shift	50 mg/g creatinine	B,Ns
Benzene in exhaled air:	Prior to next shift		
Mixed-exhaled		0.08 ppm	Sq
End-exhaled		0.12 ppm	Sq
AEL * (Du Pont)		1 ppm, 8 & 12 Hr. TWA 5 ppm, 15 minute TWA	

* AEL is Du Pont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Boiling Point	-20 to 600 F (-29 to 316 C)
Vapor Pressure	200-500 mm Hg @ 68 F (20 C)
Vapor Density	>1 (Air = 1)
% Volatiles	Variable
Solubility in Water	Insoluble
Odor	Gasoline
Form	Liquid
Color	Colorless
Specific Gravity	0.6-0.8

STABILITY AND REACTIVITY

Chemical Stability

Stable.

Conditions to Avoid

Avoid heat, sparks, and flame.

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STABILITY AND REACTIVITY (Continued)

Incompatibility with Other Materials

Incompatible or can react with oxidizers.

Decomposition

Carbon monoxide may be formed from incomplete combustion.

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

Animal studies have shown that prolonged or repeated inhalation exposures to high concentrations of some petroleum distillates have caused liver tumors in mice and kidney damage and tumors in male rats. However, kidney effects were not seen in similar studies involving female rats, guinea pigs, dogs, or monkeys. Present studies indicate the kidney effects will only occur in male rats. Also, human studies do not indicate this peculiar sensitivity for kidney damage and studies reported in 1992 showed that this particular type of rat kidney damage is not useful in predicting a human health hazard. The significance of liver tumors in mice exposed to high doses of chemicals is highly speculative and probably not a good indicator for predicting a potential human carcinogenic hazard.

Mouse skin painting studies have shown that petroleum middle distillates (boiling range 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.

One published study reports limited data suggesting long-term ingestion of 500 mg/kg of toluene caused increased malignant tumors in rats. Other more extensive inhalation studies demonstrated no carcinogenic effects in animals. Animal studies with toluene have failed to demonstrate birth defects in rats and mice. However, toluene has been shown to cause delayed growth and extra ribs in the offspring of rats and mice at inhaled doses (266-399 ppm) that were non-toxic to the mother. Toluene has not been conclusively shown to cause adverse reproductive effects in humans. Toluene overexposure may also cause cardiac irregularities and hearing loss (animal data).

XYLENE:

Eye:

Animal testing indicates this material is an eye irritant.

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TOXICOLOGICAL INFORMATION (Continued)

Skin:

ALD, rabbit: 4,320 mg/kg (Moderately toxic)

Animal testing indicates this material is a moderate to severe skin irritant. This material has not been tested for skin sensitization. Single exposure to high doses caused: Narcosis.

Ingestion:

LD50, rat: 4,500 mg/kg (Slightly toxic).

Single exposure caused: Prostration and incoordination.

Repeated exposure caused: Shallow respiration, prostration, liver and kidney effects, reduced weight gain, and altered hematology and clinical chemistry. Long-term exposure caused: Decreased body weight and histopathological changes of the liver.

Inhalation:

4 hour, LC50, rat: 6,700 ppm (Very low toxicity).

Single exposure caused: Upper respiratory tract irritation, behavioral effects, incoordination, prostration, altered respiratory rate, low blood pressure, and altered hematology. Repeated exposure caused: Incoordination; decreased response to sound; histopathological changes of the liver, kidneys, adrenals, heart, spleen, lungs, and bone marrow; altered hematology; and reduced weight gain. Long-term exposure caused: Liver effects.

Additional Toxicological Effects of Xylene:

One published study reports limited data suggesting high oral doses caused an increase in malignant tumors in rats. However, other more extensive animal studies have demonstrated no evidence of carcinogenicity.

Animal data show developmental effects only at or near levels producing other toxic effects in the adult animal. Reproductive data on adult animals show: No change in reproductive performance. Tests have shown that this material does not cause genetic damage in bacterial or mammalian cell cultures, or in animals. In animal testing, this material has not caused permanent genetic damage in reproductive cells of mammals (has not produced heritable genetic damage).

ECOLOGICAL INFORMATION

Ecotoxicological Information

AQUATIC TOXICITY:

Toluene

Moderately toxic.

96 hour LC50 - Fathead minnows: 31.7 mg/L.

Xylenes

Moderately toxic.

96 hour LC50 - Fathead minnows: 24-42 mg/L

(Continued)

DISPOSAL CONSIDERATIONS

Waste Disposal

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Do not flush to surface water or sanitary sewer system.

By itself, the liquid is expected to be a RCRA hazardous waste.

Container Disposal

Empty drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All other containers should be disposed of in an environmentally safe manner.

TRANSPORTATION INFORMATION

Shipping Information

DOT	
Proper Shipping Name	Natural Gasoline
Hazard Class	3
I.D. No. (UN/NA)	UN1257
Packing Group	I or II
DOT Label(s)	Flammable liquid
DOT Placard	Flammable

IMO
Same as DOT.

REGULATORY INFORMATION

U.S. Federal Regulations

OSHA HAZARD DETERMINATION

This material is hazardous as defined by OSHA's Hazard Communication Standard, 29 CFR 1910.1200.

CERCLA/SUPERFUND

Not Applicable

SARA, TITLE III, 302/304

This material is not known to contain extremely hazardous substances.

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

Acute	: Yes
Chronic	: Yes
Fire	: Yes
Reactivity	: No
Pressure	: No

TSCA

(Continued)

REGULATORY INFORMATION(Continued)

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

RCRA

This material, when discarded or disposed of, is not specifically listed as a hazardous waste in Federal regulations; however, it meets criteria for being ignitable according to U. S. EPA definitions (40 CFR 261).

CLEAN WATER ACT

The material contains the following ingredient(s) which is considered hazardous if spilled into navigable waters and therefore reportable to the National Response Center (1-800-424-8802).

Ingredient	Petroleum Hydrocarbons.
Reportable Quantity	Film or sheen upon or discoloration of any water surface.

State Regulations (U.S.)**CALIFORNIA "PROP 65"**

The material contains the following ingredient(s) known to the State of California to cause cancer, birth defects, or other reproductive harm. Read and follow label directions.

Ingredient	Benzene, Toluene
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Canadian Regulations

CLASS B Division 2 - Flammable Liquid.

CLASS D Division 2 Subdivision A - Very Toxic Material. Chronic Toxic Effects, Carcinogen.

CLASS D Division 2 Subdivision B - Toxic Material. Skin or Eye Irritant.

Transport/Medical Emergency Phone Number: 1-613-348-3616

OTHER INFORMATION**NFPA, NPCA-HMIS****NFPA Rating**

Health	1
Flammability	4
Reactivity	0

NPCA-HMIS Rating

Health	2 (Chronic Health Effects)
Flammability	4
Reactivity	0

Personal Protection rating to be supplied by user depending on use conditions.

Additional Information

Product Use: Blended for Motor Fuel
Chemical Plant Feedstock

(Continued)

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS	MSDS Administrator, SHEA
Address	Conoco Inc. PO Box 2197 Houston, TX 77252
Telephone	713-293-5550

Indicates updated section.

End of MSDS

