



GASC0066

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CONDENSATE, SOUR

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

CAS Number 64741-47-5

Tradenames and SynonymsCasinghead Gasoline, Sour
Natural Gasoline, Sour
0541**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, Sour

64741-47-5 100

including:

Hydrocarbons (Aromatic & Paraffinic)

>70

* Toluene

108-88-3 <15

* Xylenes

1330-20-7 <12

* Benzene

71-43-2 0.1-5

Hydrogen Sulfide

7783-06-4 0.1-3

* Regulated as a Toxic Chemical under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Components (Remarks)

Hydrogen sulfide may accumulate in container head space.

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HAZARDS IDENTIFICATION

Potential Health Effects

Acute Toxicity Data - None available for product. The component, hydrogen sulfide, can cause unconsciousness and/or death at concentrations above 400 ppm.

Other Toxicity Data -

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.

The product contains petroleum hydrocarbons which may cause irritation to eyes, skin and lungs after prolonged or repeated exposure. Extreme exposure 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 exposure may cause dizziness, slurred speech, flushed face, unconsciousness or convulsions.

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.

Hydrogen sulfide can be irritating at low concentrations to the eyes, skin, and lungs. At higher concentrations, loss of ability to smell hydrogen sulfide, respiratory paralysis, and death may occur.

Animal Studies:

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 nontoxic to the mother. Toluene has not been conclusively shown to cause adverse reproductive effects in humans.

One published study on xylene reports limited data suggesting high oral doses caused an increase in

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HAZARDS IDENTIFICATION(Continued)

malignant tumors in rats. However, other more extensive animal studies have demonstrated no evidence of carcinogenicity. Developmental toxicity was observed but only at concentrations that were maternally toxic. Xylene does not have selective toxicity for the developing fetus.

Animal studies have shown that prolonged or repeated inhalation exposure to high concentrations of some petroleum distillates have caused liver tumors in mice and kidney damage/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. The significance of liver tumors in exposed mice is highly speculative and not a good indicator for predicting a potential human carcinogenic hazard.

Mouse skin painting studies have shown that petroleum middle distillates (boiling range of 100-700 deg 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.

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	X

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

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.

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FIRST AID MEASURES(Continued)

If hydrogen sulfide could be present, see below.

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.

HYDROGEN SULFIDE

If hydrogen sulfide is present, rescue personnel must use good judgment to minimize their risk. Because hydrogen sulfide can cause death, rescuers must wear positive-pressure, full-facepiece, self-contained or supplied air, NIOSH-approved respirators.

Notes to Physicians

Activated charcoal mixture may be administered. To prepare activated charcoal mixture, suspend 50 grams activated charcoal in 400 mL water and mix thoroughly. Administer 5 mL/kg, or 350 mL for an average adult.

FIRE FIGHTING MEASURES

Flammable Properties

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

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

Special Fire Fighting Procedures: 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 exposures.

Unusual Fire and Explosion Hazards: Highly Flammable. Products of combustion may contain carbon monoxide, carbon dioxide, oxides of sulfur, 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.

Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus.

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.

Accidental Release Measures

Remove source of heat, sparks, flame, impact, friction or 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.

HANDLING AND STORAGE

Handling (Personnel)

Do not breathe vapor 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.

Storage

Store in accordance with National Fire Protection Association recommendations.

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EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Ventilation: General mechanical ventilation normally adequate but use local exhaust where necessary to maintain exposures below acceptable limits.

Personal Protective Equipment

Respiratory Protection : In atmospheres where the concentrations of hydrogen sulfide may exceed any of the exposure levels shown in the Health Hazard Section :

Type C respiratory protection such as an airline respirator with full facepiece and an escape bottle, or a SCBA with full facepiece should be used. Such respiratory protection must be operated in pressure-demand, positive-pressure, or continuous-flow mode. Use of negative pressure respirators should be avoided because of the possibility of olfactory fatigue which can be caused by hydrogen sulfide.

In all other situations :

Select appropriate NIOSH-approved organic vapor respiratory protection where necessary to maintain exposures to petroleum distillates and benzene below the acceptable levels shown in the Health Hazard Section.

Proper respirator selection should be determined by adequately trained personnel and based on the contaminant(s), the degree of potential exposure, and published respirator protection factors.

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

Eye Protection : Safety glasses with side shields and/or face shield where splashing is present. Full facepiece if respiratory protection is required for hydrogen sulfide.

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/m³, 8 Hr. TWA, Skin

BEI (ACGIH)

Determinant

Sampling Time

BEI

Notation

Hippuric acid
in urine

End of shift
Last 4 hours of

2.5 g/g creatinine B, Ns

(Continued)

EXPOSURE CONTROLS/PERSONAL PROTECTION(Continued)

	shift			
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/m3, 8 Hr. TWA		
TLV (ACGIH)		100 ppm, 434 mg/m3, 8 Hr. TWA		
		STEL 150 ppm, 651 mg/m3		
BEI (ACGIH)	:			
Determinant	Sampling Time	BEI		Notation
Methylhippuric acids in urine	End of shift	1.5 g/g creatinine		
	Last 4 hours of shift	2 mg/minute		
AEL * (Du Pont)		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		
Hydrogen Sulfide				
PEL (OSHA)		20 ppm, Ceiling		
		50 ppm - 10 Min. Max.		
TLV (ACGIH)		10 ppm, 14 mg/m3, 8 Hr. TWA		
		STEL 15 ppm, 21 mg/m3		
AEL * (Du Pont)		10 ppm, 8 & 12 Hr. 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.

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PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Boiling Point	-20 to 800 F (-29 to 427 C)
Vapor Pressure	200-500 mm Hg @ 68 F (20 C)
Vapor Density	>1 (Air = 1)
% Volatiles	Variable
Solubility in Water	Insoluble
Odor	Sulfur
Form	Liquid
Color	Colorless
Specific Gravity	0.6-0.8

STABILITY AND REACTIVITY

Chemical Stability

Stable.

Incompatibility with Other Materials

Incompatible with oxidizing materials. Avoid heat, sparks, and flame.

Decomposition

Hazardous gases/vapors produced are oxides of sulfur.
Carbon monoxide may be formed from incomplete combustion.

Polymerization

Polymerization will not occur.

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.

TRANSPORTATION INFORMATION

Shipping Information

DOT	
Proper Shipping Name	Gasoline
Hazard Class	Flammable liquid
I.D. No. (UN/NA)	UN 1203
DOT Label(s)	Flammable liquid
DOT Placard	Flammable

NOTE: Contains potentially harmful concentrations of hydrogen sulfide, which can accumulate in the head space.

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TRANSPORTATION INFORMATION(Continued)

Above DOT description allowed prior to 10/01/93:

INTERNATIONAL HM-181 (EFFECTIVE 10/01/93):

Proper Shipping Name : Natural Gasoline
Hazard Class : 3
UN/NA Number : UN 1257
Packing Group : I or II
Labels : Flammable Liquid
Placards : Flammable

NOTE: Contains potentially harmful concentrations of hydrogen sulfide, which can accumulate in vessel headspace.

REGULATORY INFORMATION**U.S. Federal Regulations**

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

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

OSHA HAZARD DETERMINATIONS

The material is hazardous as defined by OSHA's Hazard Communication Standard, 20 CFR 1910.1200.

CLEAN AIR ACT 40 CFR 50, SECTIONS 112, 114

The material contains the following Hazardous Air Pollutants : Benzene
Toluene
Xylenes

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, & LIABILITY ACT (CERCLA/SUPERFUND), 40 CFR 302

Not applicable; this material is covered by the CERCLA petroleum exclusion. Releases are not reportable.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986, TITLE III (SARA) - SECTION 302/304 - Extremely Hazardous Substances, 40 CFR 355

The material contains extremely hazardous substances at greater than 1.0% concentration as listed below; it is possible that this material may contain other extremely hazardous substances at a lower concentration.

Extremely Hazardous Substances : Hydrogen Sulfide
Threshold Planning Quantity : 500 lbs of H₂S
Reportable Quantity : 100 lbs of H₂S

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REGULATORY INFORMATION(Continued)

Concentration : 0.1-3%

TOXIC SUBSTANCES CONTROL ACT (TSCA), 40 CFR 710

The material is in the TSCA Inventory of Chemical Substances (40 CFR 710) 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 U.S. EPA definitions (40 CFR 261). This material could also become a hazardous waste if it is mixed with or comes in contact with a listed hazardous waste. If it is a hazardous waste, regulations 40 CFR 262-266 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 and therefore reportable to the National Response Center (1-800-424-8802).

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

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
Toluene

PENNSYLVANIA WORKER AND COMMUNITY RIGHT TO KNOW ACT

The material contains the following ingredients found on the Pennsylvania Worker and Community Right-to-Know Act Hazardous Substance List:

Ingredient	Category
Benzene	Environmental Hazard Special Hazardous Substance
Dimethylbenzene (Xylene)	Environmental Hazard
Hydrogen Sulfide	Environmental Hazard

(Continued)

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REGULATORY INFORMATION(Continued)

Methylbenzene (Toluene)
Natural Gas Condensate

Environmental Hazard
Hazardous Substance

FOREIGN REGULATIONS**CANADIAN HAZARDOUS PRODUCT ACT (WHMIS)**

The material is a WHMIS Controlled Product.

Class B Division 2 : Flammable Liquid.

Class D Division 1A : Very Toxic Material.

Acute Lethality.

Class D Division 2A : Very Toxic Material.

Chronic Toxic Effects.

Carcinogen.

Class D Division 2B : Toxic Material.

Skin or Eye Irritant.

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

OTHER INFORMATION**NFPA, NPCA-HMIS**

NFPA Rating

Health 2

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

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

