

Safety Data Sheet: Natural Gas Liquids/Condensates

1. Identification

Product Name: Natural Gas Liquids/Condensates

Synonyms: Natural Gas Liquids, Sweet, Condensate, natural gasoline

Product Use: Oil and Natural gas production liquids

EP Energy

1001 Louisiana Street
Houston, Texas 77002

Information: (713) 997-1000 or 855-269-0826

O'BRIEN'S: (985) 781-0804 24/7

2. Hazard(s) Identification

Note: This material has not been tested by EP Energy to determine its specific health hazards. Therefore, the information provided in this section includes health hazard information on the product components.

GHS Classification

H225: Flammable Liquids - Category 2

H331: Acute Toxicity Inhalation - Category 3

H340: Germ Cell Mutagenicity - Category 1B

H350: Carcinogenicity - Category 1A

H371: Specific Target Organ Toxicity Single Exposure - Category 3

H372: Specific Target Organ Toxicity Repeat Exposure - Category 1

H304: Aspiration Toxicity - Category 1

H336: Specific Target Organ Toxicity

H402: Toxic to the Aquatic Environment Acute - Category 3

GHS LABEL ELEMENTS



Signal Word Danger

GHS Hazard Statements

H225: Highly flammable liquid and vapor.

H331: Toxic if inhaled.

H340: May cause genetic defects.

H350: May cause cancer.

H371: May cause damage to organs

H372: Causes damage to organs through prolonged or repeated exposure

H304: May be fatal if swallowed and enters airways.

H336: May cause drowsiness or dizziness.

H402: Harmful to aquatic life

GHS Precautionary Statements

Prevention

P201: Obtain special instructions before use

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking

P233: Keep container tightly closed.

P240: Ground/bond container and receiving equipment.

P241: Use explosion-proof electrical/ventilating/lighting/equipment.

P242: Use only non-sparking tools.

P243: Take precautionary measures against static discharge.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P260: Do not breathe fume/gas/mist/vapors/spray.

P264: Wash thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P271: Use only outdoors or in well-ventilated area.

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P273: Avoid release to the environment.

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P280: Wear protective gloves/protective clothing/eye protection/face protection

Response

P303: IF ON SKIN (or hair): Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304: IF INHALED: Remove victim to fresh air and keep comfortable for breathing. Call a poison center/doctor.

P301: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting.

P308: IF exposed or concerned: Get medical advice/attention.

P370: In case of fire: Use dry chemical, carbon dioxide, or foam for extinguishing.

Storage

P233: Keep container tightly closed

P405: Store locked up

Disposal

P391: Collect spillage

P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

3. Composition/Information on Ingredients

Note: Composition will vary with geographic location, geologic formation, temperature and pressure.

Components	CAS No.	Wt% ⁽¹⁾
Propane	74-98-6	20-60
Ethane	74-84-0	1-60
n-Pentane	109-66-0	5-25
n-Hexane	110-54-3	2-13
Heptane	142-82-5	1-10
Octane	111-65-9	1-10
n-Butane	106-97-8	2-5
Cyclohexane	110-82-7	1-5
Toluene	108-88-3	0.1-5
Ethyl benzene	100-41-4	0.1-5
Xylenes	1330-20-7	0.1-5
Benzene	71-43-2	0-2
Hydrogen Sulfide	7783-06-4	Varies

⁽¹⁾Normal composition ranges are shown. Exceptions may occur depending upon the source of the condensate.

4. First-Aid Measures

Inhalation: If respiratory symptoms develop, move victim to fresh air. Seek immediate medical attention if symptoms persist. If breathing has stopped and airway is clear, provide artificial respiration. Do not use mouth-to-mouth method if victim ingested the substance. Provide artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult, if qualified. Seek immediate medical attention.

Skin Contact: Remove and isolate contaminated clothing and shoes. Wash affected areas with soap and water. If irritation persists, seek medical attention. Decontaminate clothing before reuse.

Eye Contact: Flush eyes with large amounts of water for at least 15 minutes, occasionally lifting the eyelids. Seek medical attention.

Ingestion: DO NOT INDUCE VOMITING. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. Have exposed individual rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Do not leave victim unattended. Monitor for breathing difficulties. Seek immediate medical attention.

Notes to Physician: This material may contain or liberate hydrogen sulfide. In high doses, hydrogen sulfide may produce pulmonary edema and respiratory depression or paralysis.

5. Fire-Fighting Measures

NFPA Ratings: Health: 2 Flammability: 4 Reactivity: 0

General Fire Hazards:

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Extremely flammable. Easily ignited by heat, sparks or flames or other sources of ignition. Flowing condensates can be ignited by self-generated static electricity. Containers should be grounded and bonded. Vapors from liquefied gas are initially heavier than air and spread along ground. Vapors may reach an ignition source, and flashback. Runoff to sewer may create fire or explosion hazard downstream from the source. Gases may form explosive mixtures with air. BLEVE'S (Boiling Liquid Expanding Vapor Explosions) can occur when a liquid in a pressurized container is heated to temperatures beyond its boiling point. This can lead to failure of the container and damage to the surrounding area.



Hazardous combustion/decomposition products may include carbon monoxide, carbon dioxide, hydrocarbons, nitrogen oxides, and sulfur oxides. Hydrogen sulfide may be present. Downwind personnel must be evacuated.

Extinguishing Media:

Class B fire extinguisher, dry chemical, fire-fighting foam or carbon dioxide. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. For large fires, use water spray, fog or fire-fighting foam. Water may be ineffective for fighting the fire, but may be used to keep fire-exposed containers or surrounding areas cool.

Unsuitable Extinguishing Media:

Water may be ineffective for fighting the fire, but may be used as a spray to keep surroundings area cool.

Specific Hazards During Fire Fighting:

Extremely flammable. Fire may produce irritating, corrosive and/or toxic gases.

Fire Fighting Instructions:

Do not extinguish a leaking gas flame unless the leak can be stopped. Allow gas to burn out. Promptly isolate the scene by removing all persons from the vicinity of the incident. Move containers from fire area if you can do it without risk. Use a smothering technique for extinguishing fire of this flammable liquid. Do not use a forced- water stream directly on the natural gas liquids (condensate) fires as this will scatter the fire. Use a water spray to cool fire-exposed containers and surrounding areas until well after fire is out. Do not direct water at source of leak or safety devices as icing may occur. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply. Dike fire-control water for containment and recovery. Firefighters should wear self-contained breathing apparatus and full protective clothing. Refer to Section 8 for proper PPE selection.

Precautions for Fire Involving Tanks or Car/Trailer Loads:

If tank, rail car or tank truck is involved in a fire, isolate for 800 meters (1/2 mile) in all directions. Consider initial evacuation for 800 meters (1/2 mile) in all directions. Always stay away from tanks engulfed in flame. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. If unmanned hose holders or monitor nozzles cannot be used, withdraw from area and let fire burn.

6. Accidental Release Measures**Personal Precautions:**

Extremely Flammable. Spillage of liquid product will create a fire hazard and may form an explosive atmosphere. Keep all sources of ignition and hot metal surfaces away from spill/release. The use of explosion-proof electrical equipment is recommended. Product may contain or release poisonous hydrogen sulfide gas. Provide sufficient ventilation in the affected area(s) and wear appropriate personal protective equipment as indicated in Section 8 when handling spill material.

Environmental Precautions:

Stop the leak if it can be done without risk. Prevent spilled material from entering waterways, sewers, basements or confined areas. Contain release to prevent further contamination of soils, surface water or groundwater. Clean up spill as soon as possible using appropriate techniques such as applying non-combustible absorbent materials or vacuuming. All equipment used when handling the product must be grounded. A vapor suppressing foam may be used to reduce vapors. Use clean nonsparking tools to collect absorbed material. Where feasible and appropriate, remove contaminated soil.

Methods for Containment and Clean Up:

Immediate cleanup of any spill is recommended. Build dike or use other appropriate spill response methods far ahead of spill for containment and later recovery or disposal of spilled material. Absorb spill with inert material and place in suitable container for disposal. If spilled on water, remove with appropriate equipment such as skimmers, booms or absorbents. In case of soil contamination, remove contaminated soil for remediation or disposal in accordance with applicable regulations.

Reporting:

Report spills/releases as required, to appropriate local, state and federal authorities. US Coast Guard and Environmental Protection Agency regulations require immediate reporting of spills/release that could reach any waterway. Report spill/release to the National Response Center at (800) 424-8802. In case of accident or road spill, notify Chemtrec at (800) 424-9300.

7. Handling and Storage

Handle in accordance with good industrial hygiene and safety practices. These practices include, but are not limited to, avoiding unnecessary exposure and prompt removal of material from eyes, skin, and clothing. If needed, take first aid actions as indicated in Section 4.

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Precautions for Safe Handling:

Handle as a flammable liquid. Keep away from heat, sparks and open flame. No smoking. Use only with adequate ventilation. May release or contain dangerous levels of H₂S. Use only with adequate ventilation. Wear appropriate personal protective equipment and use exposure controls as indicated in Section 8. Vent slowly to the atmosphere when opening. Avoid all contact with skin and eyes. Avoid breathing product dust or vapors. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Non-sparking tools should be used. Ground and bond all transfer and storage equipment to prevent static sparks and equip with self-closing valves, pressure vacuum bungs and flame arrestors. Review all operations which have the potential of generating and accumulating electrostatic charge and/or flammable atmosphere. Use appropriate mitigating procedures. Do not enter confined spaces without following proper entry procedures. Remove contaminated clothing immediately. Wash with soap and water after working with this product.

Scales, deposits and sludge from equipment associated with this product may have accumulation of Naturally Occurring Radioactive Materials (NORM). Equipment should be assessed for external gamma radiation.

Conditions for Safe Storage:

Keep away from flame, sparks, excessive temperatures and open flame. No smoking. Maintain vessels closed and clearly labeled. Empty vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose these vessels to sources of ignition. This material may contain or release H₂S. In a tank or other closed container, the vapor space above this material may accumulate hazardous concentrations of H₂S. Do not enter confined spaces without following proper entry procedures. Use appropriate containment to avoid environmental contamination.

Incompatibilities:

Keep away from strong oxidizers, ignition sources and heat.

8. Exposure Controls/Personal Protection

Components	CAS No.	Occupational Exposure Limits			Units
		OSHA ⁽¹⁾	ACGIH ⁽¹⁾	NIOSH ⁽²⁾	
Propane	74-98-6	1000	1000 ⁽³⁾	1000	ppm
Ethane	74-84-0	N/A	1000 ⁽³⁾	N/A	ppm
n-Pentane	109-66-0	1000	600	120 610 ^{Ceiling}	ppm
n-Hexane	110-54-3	500	50 ⁽⁴⁾	50	ppm
Heptane	142-82-5	500	400 500 ^{STEL}	85 440 ^{Ceiling}	ppm
Octane	111-65-9	500	300	75 385 ^{Ceiling}	ppm
n-Butane	106-97-8	N/A	1000 ⁽³⁾	800	ppm
Cyclohexane	110-82-7	300	100	300	ppm
Toluene	108-88-3	200 300 ^{Ceiling}	20 ⁽⁴⁾	100 150 ^{STEL}	ppm
Ethyl benzene	100-41-4	100	20 ⁽⁴⁾	100 125 ^{STEL}	ppm
Xylenes	1330-20-7	100	100 ⁽⁴⁾ 150 ^{STEL}	100 150 ^{STEL}	ppm
Benzene	71-43-2	1 5 ^{STEL}	0.5 ⁽⁵⁾ 2.5 ^{STEL}	0.1 1 ^{STEL}	ppm
Hydrogen Sulfide	7783-06-4	20 ^{Ceiling}	5 ^{STEL}	10 ^{Ceiling}	ppm
Petroleum distillates, naptha	8002-05-9	<1	500 ppm	N/A	350 mg/m ³

⁽¹⁾8-hour TWA unless otherwise specified.

⁽²⁾10-hour TWA unless otherwise specified.

⁽³⁾Exposure limit given as Aliphatic hydrocarbon gases: Alkanes [C₁-C₄].

⁽⁴⁾ACGIH has established a Biological Exposure Index (BEI) for this substance.

N/A: Not Applicable

STEL: 15-minute Short Term Exposure Limit

Ceiling: Concentration not to be exceeded at any time

Engineering Controls:

Explosion proof or local exhaust ventilation should be used to: (1) Maintain airborne chemical concentrations below applicable exposure limits, (2) Prevent accumulation of flammable vapors and formation of explosive atmospheres, and (3) Prevent formation of oxygen deficient atmospheres, especially in confined spaces.

Personal Protective Equipment

Eye Protection:

Eye protection that meets or exceeds ANSI Z.87.1 is recommended if there is a potential for liquid contact to the eyes. Safety glasses equipped

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with side shields or safety goggles are recommended. Chemical goggles should be worn during transfer operations or when there is a likelihood of misting, splashing or spraying of this material. A face shield may be necessary depending on conditions of use.

Hand Protection:

Avoid skin contact. Use impervious gloves. PVC and neoprene may be suitable for incidental contact. Nitrile rubber should be used for longer term protection when prolonged or frequent contact may occur. Gloves should be worn on clean hands and hands should be washed after removing gloves. Also wash hands with plenty of mild soap and water before eating, drinking, smoking, using toilet facilities or leaving work.

Skin and Body Protection:

Avoid skin contact. Wear long-sleeved fire-retardant garments while working with flammable and combustible liquids. Additional chemical-resistant protective gear may be required if splashing or spraying conditions exist.

Respiratory Protection:

A respiratory protection program that meets or exceeds OSHA 29 CFR 1910.134 and ANSI Z.88.2 should be followed whenever workplace conditions warrant the use of a respirator. Use a full-face positive-pressure supplied air respirator in circumstances where air-purifying respirators may not provide adequate protection or where there may be the potential for airborne exposure above the exposure limits. If exposure concentration is unknown, IDLH conditions exist or there is a potential for exposure to hydrogen sulfide above exposure limits, use a NIOSH approved self contained breathing apparatus (SCBA) or equivalent operated in a pressure demand or other positive pressure mode.

9. Physical and Chemical Properties

Flammable Properties:

Flash Point: -45 °F to -170 °F

Flammable Limits in Air % by Vol.:

Lower (LFL): 1.4-3.0 % Upper (UFL): 7.6-12.5 %

Auto-ignition Temperature: 495-850 °F

This material has not been tested by EP Energy. Values given are typical of similar products.

Appearance:	Brown to clear liquid	% Volatile by Volume:	100
Odor:	Petroleum-like, gasoline-like or rotten eggs	Viscosity:	Not available
Boiling Point:	Varies widely based on hydrocarbon content	Melting Point:	-122 °F
Freezing Point:	Not available	Vapor Density (Air = 1):	3-4 (natural gasoline)
Vapor Pressure:	Not available	pH:	Not available
Solubility in H₂O:	Negligible	Evaporation Rate:	> 1
Specific Gravity @ 60° F & 1 atm:	0.6-0.8	(Ethyl Ether = 1)	
		Molecular Wt.:	Not available

10. Stability and Reactivity

Chemical Stability:

Stable under anticipated normal conditions of use and normal temperature conditions

Conditions to Avoid/Incompatibilities:

Strong oxidizing agents, strong acids, chlorine, fluorine, bromine and metal catalysts, heat, sparks, flame and build-up of static electricity.

Hazardous Decomposition Products:

Carbon monoxide, carbon dioxide, nitrogen oxides, hydrocarbons and sulfur dioxide.

Hazardous Polymerization:

Not known to occur.

11. Toxicological Information
Information on Toxicological Effects of Substance/Mixture

Acute Toxicity	Hazard	Additional Information	LC50/LD50 Data
Inhalation			
n-Butane	Acute inhalation		LC50 rat: 658 mg/l 4 hours
n-Pentane	Acute inhalation		LC50 rat: 364 mg/l 4 hours
Propane	Acute inhalation		LC50 rat: >1442.847 mg/l 15 minutes
Natural gas condensates	Acute inhalation		LC50 rat:>5.2 mg/l 4 hours
Benzene	Acute inhalation		LC50 rat:13,050-14,380 ppm 4hours
Skin Absorption			
Natural gas condensates			Dermal LD50 rabbit:>2000 mg/kg
Ingestion (Swallowing)			
	Harmful if swallowed		
Natural gas condensates			Oral LD50 rat: 14,000 mg/kg
Benzene			Oral LD50 rat: 1,800 mg/kg

Aspiration Hazard: The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

Skin Corrosion/Irritation: May cause skin irritation with prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are exposed repeatedly.

Serious Eye Damage/Irritation: May cause moderate irritation.

Signs and Symptoms: Light hydrocarbon gases are simple asphyxiants and can cause anesthetic effects at high concentrations. Symptoms of overexposure, which are reversible if exposure is stopped, can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting. Continued exposure can lead to hypoxia (inadequate oxygen), rapid breathing, cyanosis (bluish discoloration of the skin), numbness of the extremities, unconsciousness and death.

Skin Sensitization: Skin contact is not anticipated.

Respiratory Sensitization: Excessive exposure may cause irritation to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

Specific Target Organ Toxicity (Single Exposure): Not expected to cause organ effects from single exposure.

Specific Target Organ Toxicity (Repeated Exposure): Causes damage to organs (liver, kidneys, blood, nervous system and skin) through prolonged or repeated exposure.

Carcinogenicity: May cause cancer. Exposure to light hydrocarbons in the same boiling range as this product have been associated in animal studies with effects to the central nervous system, peripheral nervous system, liver, and kidneys. The significance of these animal models to predict similar human response is uncertain. Observing good work practices and personal hygiene procedures (Sections 7 and 8) can minimize potential risks to humans.

This material contains benzene. Human health studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-forming system (particularly bone marrow), and serious blood disorders such as aplastic anemia and leukemia.

Generative Cell Mutagenicity: Some crude oil fractions have been positive in mutagenicity studies.

Reproductive Toxicity: Not expected to cause reproductive toxicity.

Other Comments: High concentrations may reduce the amount of oxygen available for breathing, especially in confined spaces. Hypoxia (inadequate oxygen) during pregnancy may have adverse effects on the developing fetus.

Toxicological data does not exist for this mixture. Altered mental state, drowsiness, peripheral motor neuropathy, irreversible brain damage (so-called Petrol Sniffers Encephalopathy), delirium, seizures, and sudden death have been reported from repeated overexposure to some hydrocarbon solvents, naphthas, and gasoline. This substance may have a potential for sensitization. Exposure to light hydrocarbons in the same boiling range as this product have been associated in animal studies with effects to the central nervous system, peripheral nervous system, liver, and kidneys. The significance of these animal models to predict similar human response is uncertain. Observing good work practices and personal hygiene procedures can minimize potential risks to humans. Harmful if swallowed. May cause cancer.

BENZENE: This product contains benzene, which can cause degeneration in blood forming bone marrow leading to anemia which may further degrade to leukemia, a type of cancer. Acute benzene poisoning causes central nervous system depression. Chronic exposure affects the hematopoietic system causing blood disorders including anemia and pancytopenia. Mutagenic and clastogenic in mammalian and non-mammalian test systems. Reproductive or developmental toxicant only at doses that are maternally toxic based on tests with animals.

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HYDROGEN SULFIDE: This product may contain or release hydrogen sulfide, which may be fatal if inhaled. Greater than 15-20 ppm continuous exposure can cause mucous membrane and respiratory tract irritation. 50-500 ppm can cause headache, nausea, dizziness, loss of reasoning and balance, difficulty breathing, fluid in the lungs and possible loss of consciousness. Greater than 500 ppm can cause rapid or immediate unconsciousness due to respiratory paralysis and death by suffocation unless removed from exposure and successfully resuscitated. Inhalation of a single breath at a concentration of 1000 ppm (0.1%) can cause immediate unconsciousness and death. Hydrogen sulfide is corrosive when moist. Skin contact may cause burns. There is a rapid loss of sense of smell on exposure to gas concentrations above 50 ppm. At high concentrations, individuals may not even recognize the odor before becoming unconscious.

Carcinogenicity:

Component (CAS No.)	ACGIH ⁽¹⁾	IARC Monographs ⁽²⁾	US NTP	OSHA Regulated
Benzene (71-43-2)	A1	1	Yes	Yes
Ethyl benzene (100-41-4)	A3	2B	No	No
Toluene (108-88-3)	A4	3	No	No
Xylene (1330-20-7)	A4	3	No	No

⁽¹⁾ACGIH Carcinogens: A1 = Confirmed human carcinogen, A2 = Suspected human carcinogen, A3 = Confirmed animal carcinogen with unknown relevance to humans, A4 = Not classifiable as a human carcinogen, A5 = Not suspected as a human carcinogen

⁽²⁾IARC Monographs: 1 = Carcinogenic to humans, 2A = Probably carcinogenic to humans, 2B = Possibly carcinogenic to humans, 3 = Not classifiable as to carcinogenicity to humans, 4 = Probably not carcinogenic to humans

12. Ecological information

Keep out of sewers, drainage areas, and waterways. Report spills and releases, as applicable, under Federal and State regulations. May be hazardous to waterways/wildlife.

13. Disposal Information

Do not dispose of waste into sewer. Do not allow this material to drain into sewers/water supplies. If discarded, this material meets the criteria of being an "ignitable" waste. If hydrogen sulfide, benzene, toluene and/or xylene are present in the waste, the waste may be considered a hazardous U-listed waste. Under RCRA, it is the responsibility of the user to determine, at the time of disposal, if the material meets federal, state, or local criteria to be defined as a hazardous waste.

14. Transport Information

UN/Identification No: UN 1268
Proper Shipping Name: Petroleum products, n.o.s (condensate)
Hazard Class: 3
Packing Group: II
ERG#: 128

UN/Identification No: UN1203
Proper Shipping Name: Gasoline
Hazard Class: 3
Packing Group: II
ERG#: 128

Additional Info: Dependent on the product's properties, the shipper may elect to classify as Gasoline UN1203 or Petroleum Crude Oil UN1267 - reference 49 CFR 172.101 for further description.

15. Regulatory Information

EPA SARA TITLE III

Section 302 EPCRA Extremely Hazardous Substances (EHS)

Product Component	CAS No.	Wt%	RQ, lb	TPQ, lb
Hydrogen Sulfide	7783-06-4	0.1-2	100	500

Section 304 CERCLA Hazardous Substances

Product Component	CAS No.	Wt%	RQ, lb
Benzene	71-43-2	0-5	10
Toluene	108-88-3	0.1-5	1000
Xylene	1330-20-7	0.1-5	100
Cyclohexane	110-82-7	0.1-5	1000
Hydrogen Sulfide	7783-06-4	0.1-2	100
Ethylbenzene	100-41-4	0.1-5	1000

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n-Hexane 110-54-3 1-10 5000

Section 311/312 Hazard Categorization

<i>Acute:</i>	<i>Chronic:</i>	<i>Fire:</i>	<i>Pressure:</i>	<i>Reactive:</i>
Yes	Yes	Yes	Yes	No

Section 313 EPCRA Toxic Substances

<i>Product Component</i>	<i>CAS No.</i>	<i>Wt. %</i>
Benzene	71-43-2	0-5
Toluene	108-88-3	0.1-5
Xylene	1330-20-7	0.1-5
Cyclohexane	110-82-7	0.1-5
Hydrogen Sulfide	7783-06-4	0.1-2
Ethylbenzene	100-41-4	0.1-5
N-Hexane	110-54-3	1-10

EPA TSCA

All components are either on the U.S. EPA TSCA Inventory List, or are not regulated under TSCA.

Key: RQ = Reportable Quantity
 TPQ = Threshold Planning Quantity (EHS)

CALIFORNIA PROPOSITION 65 WARNING

Chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm may be found in crude oil and petroleum products. Although it is possible to sufficiently refine a crude oil or its end products to remove the potential for cancer, we are advising that one or more of the listed chemicals may be present in some detectable quantities. Read and follow directions and use care when handling crude oil and petroleum products.

16. Other Information

Date Prepared: 10/27/1985, **Last Revision:** 06/01/2015

THIS INFORMATION RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED AND MAY NOT BE VALID FOR SUCH MATERIAL USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS. SUCH INFORMATION IS TO THE BEST OF THIS COMPANY'S KNOWLEDGE AND BELIEVED ACCURATE AND RELIABLE AS OF THE DATE INDICATED. HOWEVER, NO REPRESENTATION, WARRANTY OR GUARANTEE IS MADE AS TO THE ACCURACY, RELIABILITY OR COMPLETENESS. IT IS THE USER'S RESPONSIBILITY TO SATISFY THEMSELVES AS TO THE SUITABILITY AND COMPLETENESS OF SUCH INFORMATION FOR THEIR OWN PARTICULAR USE.

Key/Legend:

ACGIH - American Conference of Governmental Industrial Hygienists
 ADR - Agreement on Dangerous Goods by Road
 CAA - Clean Air Act
 CAS - Chemical Abstracts Service Registry Number
 CDG - Carriage of Dangerous Goods By Road and Rail Manual
 CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
 CFR - Code of Federal Regulations
 CNS - Central Nervous System
 EINECS - European Inventory of Existing Chemical Substances Registry Number
 ERG - Emergency Response Guidebook
 EPCRA - Emergency Planning and Community Right-to-Know Act
 GHS - Globally Harmonized System of Classification and Labeling of Chemicals
 IARC - International Agency for Research on Cancer
 IATA - International Air Transport Association
 ICAO - International Civil Aviation Organization
 IMDG - International Maritime Dangerous Goods Code
 IMO - International Maritime Organization
 MSDS - Material Safety Data Sheet
 N/E - Not Established
 NTP - National Toxicology Program
 OSHA - Occupational Safety and Health Administration
 PEL - Permissible Exposure Limit
 PPE - Personal Protective Equipment
 RCRA - Resource Conservation and Recovery Act
 RID - Regulations Concerning the International Transport of Dangerous Goods by Rail
 RQ - Reportable Quantities
 SARA - Superfund Amendments and Reauthorization Act of 1986
 SDS - Safety Data Sheet

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TCC - Tag Closed Cup
TDG - Transportation of Dangerous Goods
TLV - Threshold Limit Value
TSCA - Toxic Substance Control Act
UN/NA - United Nations / North American Number
UNECE - United Nations Economic Commission for Europe
US DOT - United States Department of Transportation
US EPA - United States Environmental Protection Agency
Vol. - Volume
WHMIS - Workplace Hazardous Materials Information System

This is the end of MSDS A0021.sds