

# Safety Data Sheet

According to OSHA HCS 2012 (29 CFR 1910.1200)



## Section 1: Identification

**Product Identifier:** **Crude Oil, Sour**  
**Other means of identification:**

- Crude Oil
- Desalted Crude Oil
- Field Crude
- Sour Petroleum Crude
- Sour Petroleum Oil
- Sour Rock Oil
- Sour Crude

**SDS Number:** H1401.1  
**Recommended Use:** Refinery Feed

**Restrictions on Use:** All others

**Responsible Party**  
Texon Midstream, LLC  
11757 Katy Freeway, Suite 1400  
Houston, TX 77079  
281-531-8400  
[www.texonlp.com](http://www.texonlp.com)

**Emergency Phone Number**  
Chemtrec: 800-424-9300 (24 Hours)

## Section 2: Hazard(s) Identification

**Classified Hazards:**

- Flammable Liquids – Category 1
- Aspiration Hazard – Category 1
- Eye Irritation – Category 2A
- Mutagenicity- Category 1A
- Carcinogenicity – Category 1
- Specific target organ toxicity (single exposure) – Category 3
- Specific Target Organ Toxicity (repeated exposure) – Category 2

**Other Hazards:** May contain or release poisonous hydrogen sulfide (H2S) gas

**Label Elements:**



**Hazard Pictograms:**

**Signal Word:** Danger

**Hazard Statements:**

- Extremely flammable liquid and vapor.
- May be fatal if swallowed and enters airways.
- Causes serious eye irritation.
- May cause drowsiness or dizziness.
- May cause genetic defects.
- May cause cancer.

May cause damage to organs through prolonged or repeated exposure. (blood system, liver, spleen, thymus)  
Toxic to aquatic life.  
May cause long lasting effects to aquatic life.

**Precautionary Statement(s):  
Prevention:**

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood.  
Keep away from heat, sparks, open flames, hot surfaces, NO SMOKING. Keep container tightly closed.  
Ground/bond container and receiving equipment.  
Use explosion-proof electrical, lighting, ventilating equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Do not breathe mist, spray, vapors, dust, fumes, gas.  
Avoid breathing fume, gas, mist, spray, vapors.  
Wash hands thoroughly after handling.  
Use only outdoors in a well-ventilated area.  
Avoid release to the environment.  
Wear eye protection, protective clothing, protective gloves.

**Response:**

In case of fire: use chemical media to extinguish.  
IF exposed or concerned: Get medical advice or attention.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
Call a POISON CENTER or doctor if you feel unwell.  
IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.  
IF IN EYES: Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice or attention.  
Get medical advice/attention if exposed or concerned about exposure.

**Storage:**

Store in well-ventilated place. Keep container tightly closed. Keep cool.  
Store locked-up.

**Disposal:**

Dispose of contents/container to comply with applicable local, national, and international regulations.

### Section 3: Composition/Information on Ingredients

Chemical Name	CASRN	Concentration <sup>1</sup>
Petroleum	8002-05-9	100%
Naphthalene	91-20-3	0.9%
Hydrogen Sulfide	7783-06-4	<1%
Benzene	71-43-2	<1%

Total / sulfur: <1.7 wt%

May contain: Nitrogen, sulfur, organic materials, Heavy metals.

May contain or release hydrogen sulfide gas.

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

<sup>1</sup> All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. Crude oil, natural gas, and natural gas condensate may contain minor amounts of sulfur, nitrogen, oxygen containing organic compounds and trace amounts of metals such as mercury, nickel, and vanadium. Composition can vary depending on source of crude.

### Section 4: First-Aid Measures

**Eye Contact:** For eye contact with product, remove contact lenses, if present. Hold eyelids apart and gently flush the affected eye(s) with lukewarm water. Seek immediate medical attention.

**Skin Contact:** May be harmful if absorbed through the skin. Remove contaminated shoes and clothing, and flush affected area(s) with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. If skin surface is not damaged, cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops, seek medical attention. Wash contaminated clothing before reuse.

**Inhalation (Breathing):** May contain hydrogen sulfide gas which may be fatal if inhaled. Overexposure may lead to headache, nausea, drowsiness, dizziness, incoordination, light-headedness, blurred vision, pulmonary edema, labored breathing, central nervous depression leading to coma and respiratory arrest. If breathing is difficult, oxygen or artificial respiration should be administered by qualified personnel. Seek immediate medical attention.

**Ingestion (Swallowing):** Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. If victim is drowsy or unconscious and vomiting, place on the left side with the head down. If possible, do not leave victim unattended and observe closely for adequacy of breathing. Seek medical attention. Wash mouth out with water and seek medical attention immediately.

**Most important symptoms/effects, acute and delayed**

**Inhalation:** Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

**Ingestion:** May be fatal if swallowed and enters airways.

**Skin contact:** Defatting to the skin. May cause skin dryness and irritation.

**Eye contact:** Causes serious eye irritation.

**Notes to Physician:** At high concentrations hydrogen sulfide may produce pulmonary edema, respiratory depression, and/or respiratory paralysis. The first priority in treatment should be the establishment of adequate ventilation and the administration of 100% oxygen. Animal studies suggest that nitrites are a useful antidote, however, documentation of the efficacy of nitrites in humans is lacking. If the diagnosis of hydrogen sulfide poisoning is confirmed and if the patient does not respond rapidly to supportive care, the use of nitrites may be an effective antidote if delivered within the first few minutes of exposure. For adults the dose is 10 mL of a 3% sodium nitrite (NaNO<sub>2</sub>) solution (0.5 gm NaNO<sub>2</sub> in 15 mL water) I.V. over 2-4 minutes. The dosage should be adjusted in children or in the presence of anemia, and methemoglobin levels, arterial blood gases, and electrolytes should be monitored closely.

Epinephrine and sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high concentrations of hydrocarbon solvents (e.g., in enclosed spaces or with deliberate abuse). The use of other drugs with less arrhythmogenic potential should be considered. If sympathomimetic drugs are administered, observe for the development of cardiac arrhythmias.

Federal regulations (29 CFR 1910.1028) specify medical surveillance programs for certain exposures to benzene above the action level or PEL (specified in Section (i) (1) (i) of the Standard). In addition, employees exposed in an emergency situation shall, as described in Section (i) (4) (i), provide a urine sample at the end of the shift for measurement of urine phenol.

**Other Comments:** Before attempting rescue, first responders should be alert to the possible presence of hydrogen sulfide, a poisonous gas with the smell of rotten eggs, and should consider the need for respiratory protection (see Section 8). Remove person to fresh air as quickly as possible. Immediately begin artificial respiration if breathing has ceased. Consider whether oxygen administration is needed. Obtain medical advice for further treatment.

## Section 5: Fire-Fighting Measures

### NFPA 704 Hazard Class

Health: 2 Flammability: 3 Instability: 0



0 (Minimal)

- 1 (Slight)
- 2 (Moderate)
- 3 (Serious)
- 4 (Severe)

**Suitable Extinguishing Media:** Dry chemical, carbon dioxide, water spray (fog) or foam is recommended. Do not use water jet. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Water may be ineffective for extinguishment, unless used under favorable conditions by experienced fire fighters.

**Unsuitable Extinguishing Media:** Never use water jet to extinguish oil fire.

#### **Specific hazards arising from the material:**

**Unusual Fire & Explosion Hazards:** Extremely flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static accumulation may be significantly increased by the presence of small quantities of water or other contaminants. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back

**Hazardous Thermal Decomposition Products:** Combustion may yield smoke, carbon monoxide, carbon dioxide, and water. Oxides of nitrogen and sulfur may also be formed.

**Special protective actions for firefighters:** For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self-contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. If this cannot be done, allow fire to burn. Move undamaged containers from immediate hazard area if it can be done safely. Stay away from ends of container. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely. Avoid spreading of burning liquid with water used for cooling purposes.

**See Section 9 for flammable properties, including Flash Point and Upper and Lower Explosive Limits.**

### **Section 6: Accidental Release Measures**

**Personal precautions, protective equipment and emergency procedures:** Extremely flammable. Spillages of liquid product will create a fire hazard and may form an explosive atmosphere. Keep all sources of ignition away from spill/release if safe to do so. Beware of accumulation of gas in low areas or contained areas, where explosive concentrations may occur. Prevent from entering drains or any place where accumulation may occur. Ventilate area and allow to evaporate. Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify persons down-wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8)

**Environmental Precautions:** Stop spill/release if it can be done safely. Prevent spilled materials from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Use foam on spills to minimize vapors. Use water sparingly to minimize environmental contamination and reduce disposal requirements. If spill occurs on water, notify appropriate authorities and advise shipping of any hazard. Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on the surface of the water, may require notification of the National Response Center (phone number: 800-424-8802).

**Methods and material for Containment and Cleaning up:**

**Small Spill:** Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large Spill:** Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g., sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13).

Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken. All contaminated media used for the purpose of clean-up should be disposed of properly in accordance with all Federal, State, and Local regulations.

## Section 7: Handling and Storage

**Precautions for Safe Handling:** Keep away from ignition sources such as heat/sparks/open flames – No smoking. Take precautionary measures against static discharge. Non-sparking tools should be used.

May contain or release dangerous levels of hydrogen sulfide. Do not breathe vapors or mists. Use only outdoors or in well-ventilated areas. Wear protective gloves/clothing and eye/face protection. Wear respiratory protection.

Wash thoroughly after handling. Use good personal hygienic practices and wear appropriate personal protective equipment (PPE). Extremely Flammable. May vaporize easily at ambient temperatures. The vapor is heavier than air and may create an explosive mixture of vapor and air. Beware of accumulation in confined spaces and low-lying areas.

Open container slowly to relieve any pressure. Electrostatic charge may accumulate and create a hazardous condition when handling or processing this material. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. The use of explosion-proof electrical equipment is recommended and may be required (see appropriate fire codes). Refer to NFPA-70 and/or API RP 2003 for specific bonding/grounding requirements.

Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29 CFR 1910.146. Do not wear contaminated clothing or shoes. Keep contaminated clothing away from sources of ignition such as sparks or open flames.

**Static Accumulation Hazard:** Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding of tanks, transfer piping, and storage tank level floats are necessary but may not, by themselves, be sufficient.

Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. Special care should be given to ensure that special slow load procedures for "switch loading" are followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil or diesel) is loaded into tanks previously containing low flash point products (such as gasoline or naphtha).

For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA) 77, 'Recommended Practice on Static Electricity', and the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.

**Conditions for safe storage:** Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

“Empty” containers retain residue and may be dangerous. Avoid exposing any part of compressed-gas cylinder to temperatures above 125°F(51.6°C). Gas cylinders should be stored outdoors or in well ventilated storerooms at no lower than ground level and should be quickly removable in an emergency.

## Section 8: Exposure Controls/Personal Protection

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH REL
<b>Petroleum</b>	Absorbed	TWA: 500 ppm 8 hours. TWA: 2000 mg/m <sup>3</sup> 8 hours.	TWA: 350 mg/m <sup>3</sup> 10 hours. CEIL: 1800 mg/m <sup>3</sup> 15 minutes
<b>Naphthalene</b>	TWA: 10 ppm 8 hours. TWA: 52 mg/m <sup>3</sup> 8 hours	TWA: 10 ppm 8 hours. TWA: 50 mg/m <sup>3</sup> 8 hours.	TWA: 10 ppm 10 hours. TWA: 50 mg/m <sup>3</sup> 10 hours. STEL: 15 ppm 15 minutes. STEL: 75 mg/m <sup>3</sup> 15 minutes
<b>Hydrogen Sulfide</b>	TWA: 1 ppm 8 hours. STEL: 5 ppm 15 minutes.	CEIL: 20 ppm AMP: 50 ppm 10 minutes	CEIL: 10 ppm 10 minutes. CEIL: 15 mg/m <sup>3</sup> 10 minutes.
<b>Benzene</b>	TWA: 0.5 ppm 8 hours. TWA: 1.6 mg/m <sup>3</sup> 8 hours. STEL: 2.5 ppm 15 minutes. STEL: 8 mg/m <sup>3</sup> 15 minutes	TWA: 1 ppm 8 hours. STEL: 5 ppm 15 minutes. <b>OSHA PEL Z2</b> TWA: 10 ppm 8 hours. CEIL: 25 ppm AMP: 50 ppm 10 minutes	TWA: 0.1 ppm 10 hours. STEL: 1 ppm 15 minutes.

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

**Engineering controls:** If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

**Eye/Face Protection:** The use of eye protection (such as splash goggles) that meets or exceeds ANSI Z87.1 is recommended when there is potential liquid contact to the eye. Depending on conditions of use, a face shield may be necessary.

**Skin/Hand Protection:** The use of gloves impervious to the specific material handled, such as nitrile exam gloves, is advised to prevent skin contact. Users should check with manufacturers to confirm the breakthrough performance of their products. Depending on exposure and use conditions, additional protection may be necessary to prevent skin contact including use of items such as chemical resistant boots, aprons, arm covers, hoods, coveralls, or encapsulated suits.

**Respiratory Protection:** A NIOSH approved, self-contained breathing apparatus (SCBA) or equivalent operated in a pressure demand or other positive pressure mode should be used in situations of oxygen deficiency (oxygen content less than 19.5 percent), unknown exposure concentrations, or situations that are immediately dangerous to life or health (IDLH).

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use.

If benzene concentrations equal or exceed applicable exposure limits, OSHA requirements for personal protective equipment, exposure monitoring, and training may apply (29 CFR 1910.1028 - Benzene).

Workplace monitoring plans should consider the possibility that heavy metals such as mercury may concentrate in processing vessels and equipment presenting the possibility of exposure during various sampling and maintenance operations. Implement appropriate respiratory protection and the use of other protective equipment as dictated by monitoring results (See Sections 2 and 7).

**Other Protective Equipment:** Eye wash and quick-drench shower facilities should be available in the work area. Thoroughly clean shoes and wash contaminated clothing before reuse.

**Suggestion provided this Section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.**

## Section 9: Physical and Chemical Properties

Data represent typical values and are not intended to be specifications. N/A = Not Applicable; N/D = Not Determined

<b>Appearance:</b> Amber to Black	<b>Flash Point: Closed cup:</b> <-7°C (<19.4°F) [Estimated.]
<b>Physical Form:</b> Liquid	
<b>Odor:</b> Petroleum/Rotten egg/Sulfurous	<b>Initial Boiling Point/Range:</b> -20 to 800°F/-29 to 427°C.
<b>Odor Threshold:</b> N/D	<b>Vapor Pressure:</b> 12-145 psia (Reid VP)
<b>pH:</b> N/A	<b>Partition Coefficient (n-octanol/water) (Kow):</b> N/D
<b>Vapor Density (air=1):</b> >1	<b>Melting/Freezing Point:</b> N/D
<b>Upper Explosive Limits (vol % in air):</b> 6.0	<b>Auto Ignition Temperature:</b> 590°F / 310°C
<b>Lower Explosive Limits (vol % in air):</b> <1.1	<b>Decomposition Temperature:</b> N/D
<b>Evaporation Rate (nBuAc=1):</b> N/A	<b>Specific Gravity (water=1):</b> 0.6-0.8 @ 60°F (15.6°C)
<b>Particle Size:</b> N/A	<b>Relative Density: 0.7 to 1.03 [Water = 1 [@ 15.6 °C (60 °F)]]</b>
<b>Percent Volatile:</b> N/D	<b>Viscosity:</b> N/A
<b>Flammability (solid, gas):</b> N/A	<b>Solubility in Water:</b> no

## Section 10: Stability and Reactivity

**Stability:** Stable under normal ambient and anticipated conditions of use.

**Conditions to Avoid:** Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind containers. Do not allow vapor to accumulate in low or confined areas.

**Material to Avoid (Incompatible Materials):** Oxidizing and reducing materials.

**Hazardous Decomposition Products:** Not anticipated under normal conditions of use.

**Hazardous Polymerization:** Not known to occur under normal conditions of use.

## Section 11: Toxicological Information

Information on Toxicological Effects of Substance/Mixture: Toxicological data does not exist for condensate mixtures as components vary widely. Toxicological Data is based on the components that may be present.

Component	Route to Exposure	Target Organs	Single Exposure	Repeated Exposure
Petroleum	Dermal	Blood system, liver, spleen, thymus	Category 3	Category 2
Naphthalene	Dermal	Blood system, eyes	Category 3	Category 2

Benzene	Dermal, oral, inhalation	Hematopoietic system	Category 3	Category 1
Hydrogen Sulfide	Dermal	Skin	Category 3	N/A

**Aspiration Hazard:** May be fatal if swallowed and enters airways.

**Skin Corrosion/Irritation:** Defatting to the skin. May cause skin dryness and irritation.

**Serious Eye Damage/Irritation:** Causes eye irritation.

**Symptoms of Overexposure:** Effects of overexposure can include slight irritation of the respiratory tract, nausea, vomiting, and signs of nervous system depression (e.g., headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue). Continued exposure to high concentrations can result in vomiting, cardiac irregularities and sudden loss of consciousness.

**Inhalation:** This material contains hydrogen sulfide, a poisonous gas with the smell of rotten eggs. The smell disappears rapidly because of olfactory fatigue so odor may not be a reliable indicator of exposure. Effects of overexposure include irritation of the eyes, nose, throat and respiratory tract, blurred vision, photophobia (sensitivity to light), and pulmonary edema (fluid accumulation in the lungs). Severe exposures can result in nausea, vomiting, muscle weakness or cramps, headache, disorientation and other signs of nervous system depression, irregular heartbeats, convulsions, respiratory failure, and death.

**Ingestion:** Adverse symptoms may include nausea/vomiting, headache, drowsiness/fatigue, and unconsciousness.

**Respiratory Sensitization:** Not expected to be a respiratory sensitizer

**Skin Sensitization:** Not expected to be a skin sensitizer.

**Specific Target Organ Toxicity (Single Exposure):** May cause drowsiness or dizziness as well as CNS (Central Nervous System) depression, narcosis, reduced alertness, etc.

**Specific Target Organ Toxicity (Repeated Exposure):** May cause damage to organs including eyes, skin, respiratory system, blood, central nervous system, liver, kidneys, and bone marrow through prolonged or repeated exposure.

**Carcinogenicity:** May cause cancer. Risk of cancer depends on duration and level of exposure.

**Germ Cell Mutagenicity:** May cause genetic effects.

**Reproductive Toxicity:** No known significant effects or critical hazards.

## Toxicological Effects of Components

### Benzene

**Carcinogenicity:** Benzene is a known human carcinogen for all routes of exposure and is known to produce acute myelogenous leukemia (a form of cancer) in humans. Benzene has been identified as a human carcinogen by IARC, the US National Toxicology Program, and the US Occupational Safety and Health Administration.

**Target Organs:** Prolonged or repeated exposures to benzene vapors can cause damage to the blood and blood forming organs, including disorders like leucopenia, thrombocytopenia, and aplastic anemia.

**Reproductive Toxicity:** Some studies in occupationally exposed women have suggested benzene exposure increased risk of miscarriage and stillbirth and decreased birth weight and gestational age. The size of the effects detected in these studies was small, and ascertainment of exposure and outcome in some cases relied on self-reports, which may limit the reliability of these results.

**Germ Cell Mutagenicity:** Benzene exposure has resulted in chromosomal aberrations in human lymphocytes and animal bone marrow cells. Exposure has also been associated with chromosomal aberrations in sperm cells in human and animal studies.

### Hydrogen Sulfide

**Target Organs:** May be fatal if inhaled.

## Section 12: Ecological Information



**Ecotoxicity:**

Ecology - General: Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Petroleum (8002-05-9)	
LC50 Fish 1	7.1 mg/l (Species: Pimephales promelas, Exposure time 96 h)
LC50 Other Aquatic Organisms 1	2.7 mg/l LL50 96 hr (Kelp forest mysid shrimp)
EC50 Daphnia 1	6.9 mg/l (Exposure time: 48 h)

Naphthalene (91-20-3)	
LC50 Fish 1	5.74 - 6.44 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	2.16 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	1.6 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
EC50 Daphnia 2	1.96 mg/l (Exposure time: 48 h - Species: Daphnia magna [Flow through])

Toluene (108-88-3)	
LC50 Fish 1	15.22 (15.22 - 19.05) mg/l (Exposure time: 96 h - Species: Pimephales promelas [flowthrough])
EC50 Daphnia 1	5.46 (5.46 - 9.83) mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 Fish 2	12.6 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 2	11.5 mg/l (Exposure time: 48 h - Species: Daphnia magna)
NOEC Chronic Fish	1.4 mg/l (Oncorhynchus kisutch)
NOEC Chronic Crustacea	0.74 mg/l (Ceriodaphnia dubia)

Ethylbenzene (100-41-4)	
LC50 Fish 1	11.0 - 18.0 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 1	1.8 - 2.4 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	4.2 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [semi-static])
NOEC Chronic Crustacea	0.956 mg/l

Hydrogen sulfide (7783-06-4)	
LC50 Fish 1	0.0448 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])
LC50 Fish 2	0.016 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])

Sulfur (7704-34-9)	
LC50 Fish 1	866 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 1	736 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	14 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

**Persistence and Degradability**

Crude Oil Sour	
Persistence and Degradability	May cause long-term adverse effects in the environment.

**Bio accumulative Potential**

Crude Oil Sour	
Bioaccumulative Potential	Not established.

Naphthalene (91-20-3)	
BCF Fish 1	30 - 430
Log Pow	3.6

Xylenes (o-, m-, p- isomers) (1330-20-7)	
BCF Fish 1	0.6 (0.6 - 15)
Log Pow	2.77 - 3.15

Toluene (108-88-3)	
Log Pow	2.7

Ethylbenzene (100-41-4)	
BCF Fish 1	15
Log Pow	3.2

Hydrogen sulfide (7783-06-4)	
BCF Fish 1	(no bioaccumulation expected)
Low Pow	0.45 (at 25 °C)

**Mobility in Soil:** Not available

**Other Adverse Effects:** Avoid releasing into the environment

**Bioaccumulative Potential:** Log Kow values measured for the hydrocarbon components of this material range from 3 to greater than 6 and therefore are regarded as having the potential to bioaccumulate. In practice, metabolic processes or physical properties may prevent this effect or limit bioavailability.

### Section 13: Disposal Considerations

**Disposal Instructions:** The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Waste from Residues:** Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Hazardous Waste Code:** This material, if discarded as produced, would not be a federally regulated RCRA "listed" hazardous waste. See Sections 7 and 8 for information on handling, storage and personal protection and Section 9 for physical/chemical properties. It is possible that the material as produced contains constituents which are not required to be listed, but could affect the hazardous waste determination. Additionally, use which results in chemical or physical change of this material could subject it to regulation as a hazardous waste.

Container contents should be completely used, and containers should be emptied prior to discard. Container residues could be considered hazardous wastes.

**EPA Waste Number(s):**

- **D001** (Ignitability characteristic)
- **D018** (Toxicity characteristic (Benzene))

**Contaminated Packaging:** Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out.

### Section 14: Transport Information

**U.S. Department of Transportation (DOT)**

**Shipping Description:**

If vapor pressure is < = 300 kPa (43.5 psia) at 50°C (122°F) and H2S is <8.8 molar %, shipping description is: **UN1267**, Petroleum crude oil, class 3 packaging.

**Non-Bulk Package Marking:**

Must be consistent with shipping description, either:  
Petroleum Crude Oil, **UN1267**

**Non-Bulk Package Labeling:**

For **UN1267**: Flammable liquid



**Bulk Package/Placard Marking:**

For **UN1267**: Flammable/1267

**Packaging - References:**

For **UN1267**: 49 CFR 173.150; 173.201; 173.243 [PG I]  
-or- 49 CFR 173.150; 173.202; 173.242 [ PG II ] (Exceptions; Non-bulk; Bulk)

**Hazardous Substance:** See Section 15 for Regulatory Information

**Emergency Response Guide:** **UN1267** - 128

Container(s) greater than 5 liters (liquids) or 5 kilograms (solids), shipped by water mode and ALL bulk shipments may require the shipping description to contain the "Marine Pollutant" notation (49 CFR 172.203(l)) and the container(s) to display the "Marine Pollutant Mark" (49 CFR 172.322).

The following alternate shipping description order may be used until January 1, 2013: Proper Shipping name, Hazard Class or Division, (Subsidiary Hazard if any), UN or NA number, Packing Group

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

Other shipping description elements may be required for DOT compliance.

**International Maritime Dangerous Goods (IMDG)**

**Shipping Description:**

If vapor pressure is < = 300 kPa (43.5 psia) at 50°C (122°F) and H2S is <8.8 molar %, shipping description is: **UN1267**, Petroleum crude oil, class 3 packaging.

**Labels:**

For **UN1267**: Flammable liquid

**Placards/Marking (Bulk):**

For **UN1267**: Flammable/1267

**Packaging - Non-Bulk:**

For **UN1267**: P001

**EMS:**

For **UN1267**: F-E, S-E

**Note:**

U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 25. If transported in bulk by marine vessel in international waters, product is being carried under the scope of MARPOL Annex I.

**International Civil Aviation Org. / International Air Transport Assoc. (ICAO/IATA)**

**UN/ID #:**

UN 1267

**Proper Shipping Name:**

**For UN1267: Petroleum Crude Oil**

**Hazard Class/Division:**

For UN1267: 3

**Subsidiary risk:** None

**Packing Group:**

For UN1267: I or II [Determined by IATA 3.3.2]

**Non-Bulk Package Marking:**

For UN1267: Petroleum crude oil, UN1267

**Labels:**

For UN1267: Flammable liquid

**ERG Code:**

For UN 1267: 3L

	LTD. QTY	Passenger Aircraft	Cargo Aircraft Only
Packaging Instruction #:	UN1267 – Forbidden – [PG I]	UN1267 – 351 – [PG I]	UN1267 – 361 – [PG I]
Max. Net. Qty. Per Package:	UN1267 – None (PG I)	UN1267 – 1L – [PG I]	UN1267 – 30 L – [PG I] 60 L – [PG II] 0

**Section 15: Regulatory Information**

**OSHA HAZARD COMMUNICATION STANDARD**

This material has been evaluated and determined to be a “Hazardous Chemical” as defined in OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**CERCLA – Section 302 Extremely Hazardous Substances and TPQs (in pounds)**

This material contains the following chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

Components	TPQ	EPCRA RQ
Hydrogen Sulfide	500 lb.	100 lb.

**CERCLA/SARA – Section 311/312 (Title III Hazard Categories)**

Acute Health: Yes  
Chronic Health: Yes  
Fire Hazard: Yes  
Pressure Hazard: No  
Reactive Hazard: No

**CERCLA/SARA – Section 313 and 40 CFR 372**

This material contains the following chemicals subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR 372.

Components	Concentration	de minimis
Benzene	<5	0.1%
Ethyl Benzene	1-3	0.1%
Toluene	1-7	1.0%
Xylenes	1-8	1.0%
Toluene	1-7	1.0%
n-Hexane	2-4	1.0%

### **EPA (CERCLA) Reportable Quantity (in pounds)**

EPA's Petroleum Exclusion applies to this material – (CERCLA 101(14)).

### **California Proposition 65**

Warning: This material may contain detectable quantities of the following chemicals, known to the State of California to cause cancer, birth defects, or other reproductive harm, and which may be subject to the requirements of California Proposition 65 (CA Health and Safety Code Section 25249.5):

<b>Components</b>	<b>Type of Toxicity</b>
Toluene	Developmental Toxicant Female Reproductive Toxicant
Benzene	Cancer Developmental Toxicant Male Reproductive Toxicant
Ethyl Benzene	Cancer

### **Right to Know Information**

The recipient of this Safety Data Sheet should review applicable state and local regulations in order to determine whether additional "Right to Know" information is required (see <https://www.osha.gov/dcsp/osp/statestandards.html>). If applicable, the recipient may contact Texon (see Section 1) to obtain any such additional information.

### **National Chemical Inventories**

All components are either listed on the US TSCA Inventory, or are not regulated under TSCA  
All components are either on the DSL, or are exempt from DSL listing requirements

**U.S. Export Control Classification Number:** EAR99

## **Section 16: Other Information**

<b>Date of Issue:</b>	<b>Previous Issue Date:</b>	<b>SDS Number:</b>	<b>Status:</b>
07/25/2024	08/22/2022	H14001.1	Final Draft

### **Revised Sections or Basis for Revision: GHS Updates**

Identification (Section 1)  
Hazards Identification (Section 2)  
Composition/ Information on Ingredients (Section 3)  
First Aid Measures (Section 4)  
Fire-Fighting Measures (Section 5)  
Accidental Release Measures (Section 6)  
Handling and Storage (Section 7)  
Exposure Controls/Personal Protection (Section 8)  
Physical and Chemical Properties (Section 9)  
Stability and Reactivity (Section 10)  
Toxicological Information (Section 11)  
Ecological Information (Section 12)  
Disposal Considerations (Section 13)  
Transport Information (Section 14)  
Regulatory Information (Section 15)  
Other Information (Section 16)

### **Guide to Abbreviations:**

ACGIH = American Conference of Governmental Industrial Hygienists; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; EPA = Environmental Protection Agency; GHS = Globally Harmonized System; IARC = International Agency for Research on Cancer; INSHT = National Institute for Health and Safety at Work; IOPC = International Oil Pollution Compensation; LEL = Lower Explosive Limit; NE = Not Established; NFPA = Nation

Fire Protection Association; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit (OSHA); SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value (ACGIAH); TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; WHMIS = Worker Hazardous Materials Information System (Canada)

**Disclaimer of Expressed and Implied Warranties:**

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