



Safety Data Sheet

Section 1: Identification

Product identifier

- Product Name** • **Petroleum Crude Oil**
- Synonyms** • Crude Oil
- SDS Number/Grade** • 0011NOR001

Relevant identified uses of the substance or mixture and uses advised against

- Recommended use** • Natural mineral for refining into fuels and asphalt.

Details of the supplier of the safety data sheet

- Manufacturer** • Northern Tier Energy
 301 St. Paul Park Road
 St. Paul Park, MN 55071
 United States
 www.ntenergy.com

Telephone (General) • 651-459-9771

Emergency telephone number

- Chemtrec** • 800-424-9300

Section 2: Hazard Identification

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

Classification of the substance or mixture

- OSHA HCS 2012**
- Flammable Liquids 2
 - Aspiration 1
 - Skin Irritation 2
 - Eye Irritation 2
 - Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects
 - Germ Cell Mutagenicity 1B
 - Carcinogenicity 2
 - Reproductive Toxicity 1B
 - Specific Target Organ Toxicity Repeated Exposure 1
 - Specific Target Organ Toxicity Repeated Exposure 2

Label elements

OSHA HCS 2012

DANGER



- Hazard statements**
- Highly flammable liquid and vapour
 - May be fatal if swallowed and enters airways
 - Causes skin irritation
 - Causes serious eye irritation
 - May cause drowsiness or dizziness
 - May cause genetic defects.
 - Suspected of causing cancer.
 - May damage fertility or the unborn child.
 - Causes damage to organs through prolonged or repeated exposure.
 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

- 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 and/or hot surfaces. - No smoking.
 - Keep container tightly closed.
 - Ground and/or bond container and receiving equipment.
 - Use explosion-proof electrical/ventilating/lighting/equipment.
 - Use only non-sparking tools.
 - Take precautionary measures against static discharge.
 - Do not breathe mists, vapours, and/or spray.
 - Wash thoroughly after handling.
 - Do not eat, drink or smoke when using this product.
 - Use only outdoors or in a well-ventilated area.
 - Wear protective gloves/protective clothing/eye protection/face protection.
- Response**
- In case of fire: Use appropriate media for extinction.
 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 - Call a POISON CENTER or doctor/physician if you feel unwell.
 - If on skin: Wash with plenty of water .
 - Specific treatment, see supplemental first aid information.
 - Take off contaminated clothing and wash before reuse.
 - If skin irritation occurs: Get medical advice/attention.
 - 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/attention.
 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 - Do NOT induce vomiting.
 - IF exposed or concerned: Get medical advice/attention.
 - Get medical advice/attention if you feel unwell.
- Storage/Disposal**
- Store in a well-ventilated place. Keep container tightly closed.
 - Keep cool.
 - Store locked up.
 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Other hazards

OSHA HCS 2012

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to: WHMIS

Classification of the substance or mixture

WHMIS

- Flammable Liquids - B2
- Very Toxic - D1A
- Other Toxic Effects - D2A
- Other Toxic Effects - D2B

Label elements

WHMIS



- Flammable Liquids - B2
- Very Toxic - D1A
- Other Toxic Effects - D2A
- Other Toxic Effects - D2B

Other hazards

WHMIS

- In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

Section 3 - Composition/Information on Ingredients

Substances

- Material does not meet the criteria of a substance.

Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Petroleum	CAS:8002-05-9 EC Number:232-298-5 EU Index:649-049-00-5	98% TO 100%	Ingestion/Oral-Rat LD50 • >4300 mg/kg	OSHA HCS 2012: Flam. Liq. 2; Eye Irrit. 2; Skin Irrit. 2; STOT SE 3: Narc.; Asp. Tox. 1; Muta. 1B (Orl, Inhl); Carc. 1A (Inhl); Repr. 1B (Inhl); STOT RE 1 (CNS, Inhl); (Blood, Bone marrow, Inhl); STOT RE 2 (Nervous System)	NDA
Xylene	CAS:1330-20-7 EC Number:215-535-7 EU Index:601-022-00-9	0% TO 5%	Ingestion/Oral-Rat LD50 • 4300 mg/kg Inhalation-Rat LC50 • 5000 ppm 4 Hour(s) Skin-Rabbit LD50 • >1700 mg/kg	OSHA HCS 2012: Flam. Liq. 3; Acute Tox. 4 (Inhl); Skin Irrit. 2; Eye Irrit. 2; Repr. 1B (Inhl); STOT SE 3: Narc.; STOT SE 3: Resp. Irrit.	NDA
Toluene	CAS:108-88-3 EC Number:203-625-9 EU Index:601-021-00-3	0% TO 5%	Ingestion/Oral-Rat LD50 • 636 mg/kg Inhalation-Rat LC50 • 49 g/m ³ 4 Hour(s) Skin-Rabbit LD50 • 14100 µL/kg	OSHA HCS 2012: Flam. Liq. 2; Acute Tox. 4 (Orl); Skin Irrit. 2; Eye Irrit. 2; Muta. 1B; Repr. 2; STOT SE 3: Narc.; STOT RE 1 (CNS, Inhl); Asp. Tox. 1	NDA
Hydrogen sulfide	CAS:7783-06-4 EC Number:231-977-3 EU Index:016-001-00-4	0% TO 4%	Inhalation-Rat LC50 • 444 ppm 4 Hour(s)	OSHA HCS 2012: Flam. Gas 1; Press. Gas; Eye Irrit. 2; Acute Tox. 2 (inhl); STOT SE 3: Resp. Irrit.	NDA
Sulfur Compounds	NDA	0% TO 3%	NDA	OSHA HCS 2012: Not Classified	NDA

Hexane	CAS:110-54-3 EC Number:203-777-6 EU Index:601-037-00-0	0% TO 3%	Ingestion/Oral-Rat LD50 • 25 g/kg Inhalation-Rat LC50 • 48000 ppm 4 Hour (s)	OSHA HCS 2012: Flam. Liq. 2; Repr. 2; STOT RE 2 (CNS & Nervous System); Skin Irrit. 2; Eye Irrit. 2B; STOT SE 3: Narc. & Resp. Irrit.; Asp. Tox. 1	NDA
Benzene	CAS:71-43-2 EC Number:200-753-7 EU Index:601-020-00-8	0% TO 2%	Ingestion/Oral-Rat LD50 • 930 mg/kg Skin-Rabbit LD50 • >9400 µg/kg	OSHA HCS 2012: Flam. Liq. 2; Acute Tox. 4 (Orl); Acute Tox. 4 (Inhl); Skin Irrit. 2; Eye Irrit. 2; Muta. 1B (Orl, Inhl); Carc. 1A (Inhl); Repr. 2 (Inhl); STOT SE 3: Narc. (Inhl); STOT RE 1 (Blood, Bone marrow, Inhl); Asp. Tox. 1	NDA

Section 4: First-Aid Measures

Description of first aid measures

Inhalation

- Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. Get medical attention if symptoms occur.

Skin

- In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Remove and isolate contaminated clothing. Wash skin with soap and water. If irritation develops and persists, get medical attention.

Eye

- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.

Ingestion

- Do NOT induce vomiting. Obtain medical attention immediately if ingested.

Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5: Fire-Fighting Measures

Extinguishing media

- Suitable Extinguishing Media**
- For small fires, Class B fire extinguishing media such as CO₂, dry chemical, foam (AFFF/ATC) or water spray.
For large fires, water spray, fog or foam (AFFF/ATC)

Unsuitable Extinguishing Media

- Avoid using straight water streams.

Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards

- **HIGHLY FLAMMABLE:** Will be easily ignited by heat, sparks or flames. Containers may explode when heated. Many liquids are lighter than water. Vapors may form explosive mixtures with air. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapors may travel to source of ignition and flash back. Vapor explosion hazard indoors, outdoors or in sewers. Runoff to sewer may create fire or explosion hazard.

Hazardous Combustion Products

- No data available

Advice for firefighters

- Structural firefighters' protective clothing will only provide limited protection. Wear positive pressure self-contained breathing apparatus (SCBA). Move containers from fire area if you can do it without risk.
LARGE FIRES: Cool containers with flooding quantities of water until well after fire is out.

Section 6 - Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal Precautions

- Ventilate enclosed areas. Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Emergency Procedures

- As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions. LARGE SPILL: Consider initial downwind evacuation for at least 300 meters (1000 feet) ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering.

Environmental precautions

- Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Containment/Clean-up Measures

- Stop leak if you can do it without risk. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean non-sparking tools to collect absorbed material. A vapor suppressing foam may be used to reduce vapors. All equipment used when handling the product must be grounded. LARGE SPILLS: Dike far ahead of liquid spill for later disposal. LARGE SPILLS: Water spray may reduce vapor; but may not prevent ignition in closed spaces.

Section 7 - Handling and Storage

Precautions for safe handling

Handling

- Use only in well ventilated areas. Avoid contact with heat and ignition sources. Do not use sparking tools. Take precautionary measures against static charges. All equipment used when handling the product must be grounded. Do not cut, drill, grind or weld on empty containers since they may contain explosive residues. Harmful concentrations of hydrogen sulfide (H₂S) gas can accumulate in excavations and low-lying areas as well as the vapor space of storage and bulk transport compartments. Stay upwind and vent open hatches before unloading. Wear appropriate personal protective equipment, avoid direct contact. Avoid breathing mist, vapours and/or spray. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

Conditions for safe storage, including any incompatibilities

Storage

- Keep container tightly closed. Store in appropriately labeled containers. Store in a cool/low-temperature, well-ventilated place.

Section 8 - Exposure Controls/Personal Protection

Control parameters

Exposure Limits/Guidelines			
Result	ACGIH	NIOSH	OSHA

Hydrogen sulfide (7783-06-4)	Ceilings	Not established	10 ppm Ceiling (10 min); 15 mg/m ³ Ceiling (10 min)	20 ppm Ceiling
	STELs	5 ppm STEL	Not established	Not established
	TWAs	1 ppm TWA	Not established	Not established
Toluene (108-88-3)	Ceilings	Not established	Not established	300 ppm Ceiling
	TWAs	20 ppm TWA	100 ppm TWA; 375 mg/m ³ TWA	200 ppm TWA
	STELs	Not established	150 ppm STEL; 560 mg/m ³ STEL	Not established
Benzene (71-43-2)	Ceilings	Not established	Not established	25 ppm Ceiling
	STELs	2.5 ppm STEL	1 ppm STEL	5 ppm STEL (see 29 CFR 1910.1028)
	TWAs	0.5 ppm TWA	0.1 ppm TWA	10 ppm TWA (applies to industry segments exempt from the benzene standard at 29 CFR 1910.1028); 1 ppm TWA
Xylene (1330-20-7)	TWAs	100 ppm TWA	Not established	100 ppm TWA; 435 mg/m ³ TWA
	STELs	150 ppm STEL	Not established	Not established
Hexane (110-54-3)	TWAs	50 ppm TWA	50 ppm TWA; 180 mg/m ³ TWA	500 ppm TWA; 1800 mg/m ³ TWA
Petroleum (8002-05-9)	Ceilings	Not established	1800 mg/m ³ Ceiling (15 min)	Not established
	TWAs	Not established	350 mg/m ³ TWA	Not established

Exposure controls

Engineering Measures/Controls

- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Use explosion-proof electrical/ventilating/lighting/equipment.

Personal Protective Equipment

Respiratory

- In case of insufficient ventilation, wear suitable respiratory equipment.

Eye/Face

- Wear safety goggles.

Skin/Body

- Wear appropriate gloves.

Environmental Exposure Controls

- Follow best practice for site management and disposal of waste. Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

STEL = Short Term Exposure Limits are based on 15-minute exposures

NIOSH = National Institute of Occupational Safety and Health

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

OSHA = Occupational Safety and Health Administration

Section 9 - Physical and Chemical Properties

Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Amber to black viscous liquid.
Color	Amber to black.	Odor	No data available
Odor Threshold	No data available		
General Properties			
Boiling Point	100 to 1000 F(37.7778 to 537.7778 C)	Melting Point/Freezing Point	No data available

Decomposition Temperature	No data available	pH	Neutral
Specific Gravity/Relative Density	0.8 to 1 Water=1	Water Solubility	Slightly Soluble 0.1 to 1 %
Viscosity	No data available		
Volatility			
Vapor Pressure	No data available	Vapor Density	No data available
Evaporation Rate	No data available		
Flammability			
Flash Point	20 to 100 F(-6.6667 to 37.7778 C)	UEL	No data available
LEL	No data available	Autoignition	No data available
Flammability (solid, gas)	No data available		
Environmental			
Octanol/Water Partition coefficient	No data available		

Section 10: Stability and Reactivity

Reactivity

- No dangerous reaction known under conditions of normal use.

Chemical stability

- Stable under normal temperatures and pressures.

Possibility of hazardous reactions

- Hazardous polymerization will not occur.

Conditions to avoid

- Excessive heat, sources of ignition and open flames.

Incompatible materials

- Strong oxidizers such as nitrates, chlorates, peroxides.

Hazardous decomposition products

- Combustion produces carbon monoxide, aldehydes, aromatic and other hydrocarbons.

Section 11 - Toxicological Information

Information on toxicological effects

		Components
Petroleum (98% TO 100%)	8002-05-9	Acute Toxicity: Ingestion/Oral-Rat LD50 • >4300 mg/kg; Skin-Rabbit LD50 • >2000 mg/kg; Irritation: Eye-Rabbit • 100 mg • Mild irritation; Skin-Rabbit • 500 mg 24 Hour(s) • Moderate irritation; Reproductive: Skin-Rat TDLo • 200 mg/kg (1-19D preg); <i>Reproductive Effects:Maternal Effects:Other effects; Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus)</i>
Toluene (0% TO 5%)	108-88-3	Acute Toxicity: Ingestion/Oral-Rat LD50 • 636 mg/kg; Inhalation-Rat LC50 • 49 g/m ³ 4 Hour(s); Inhalation-Human TCLo • 200 ppm; <i>Brain and Coverings:Recordings from specific areas of CNS; Behavioral:Antipsychotic; Blood:Changes in bone marrow not included above;</i> Inhalation-Human TCLo • 1500 mg/m ³ 8 Hour(s); <i>Sense Organs and Special Senses:Eye:Lacrimation; Sense Organs and Special Senses:Eye:Conjunctive irritation; Behavioral:Ataxia;</i> Inhalation-Man TCLo • 50 ppm; <i>Kidney, Ureter, and Bladder:Other changes in urine composition;</i> Skin-Rabbit LD50 • 14100 µL/kg; Irritation: Eye-Rabbit • 2 mg 24 Hour(s) • Severe irritation; Skin-Rabbit • 20 mg 24 Hour(s) • Moderate irritation; Multi-dose Toxicity: Inhalation-Mouse TCLo • 250 ppm 4 Day(s)-Continuous; <i>Behavioral:Convulsions or effect on seizure threshold; Behavioral:Abuse;</i> Inhalation-Mouse TCLo • 50 ppm 12 Week(s)-Intermittent; <i>Brain and Coverings:Other degenerative changes;</i> Inhalation-Rat TCLo • 10 ppm 6 Hour(s) 13 Week(s)-Intermittent; <i>Brain and Coverings:Other degenerative changes; Biochemical:Enzyme inhibition, induction, or change in blood or tissue</i>

		<p>levels:Multiple enzyme effects; Mutagen: Micronucleus test • Ingestion/Oral-Mouse • 200 mg/kg; Sister chromatid exchange • Inhalation-Human • 252 µg/L 19 Year(s); Cytogenetic analysis • Inhalation-Rat • 5400 µg/m³ 16 Week(s)-Intermittent; Reproductive: Inhalation-Mouse TCLo • 500 mg/m³ 24 Hour(s)(6-13D preg); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus)</i>; Inhalation-Mouse TCLo • 200 ppm 7 Hour(s)(7-16D preg); <i>Reproductive Effects:Specific Developmental Abnormalities:Urogenital system</i></p>
Xylene (0% TO 5%)	1330-20-7	<p>Acute Toxicity: Ingestion/Oral-Rat LD50 • 4300 mg/kg; Liver:Other changes; Kidney, Ureter, and Bladder:Other changes; Inhalation-Rat LC50 • 5000 ppm 4 Hour(s); Inhalation-Man LCLo • 10000 ppm 6 Hour(s); Behavioral:General anesthetic; Lungs, Thorax, or Respiration:Cyanosis; Blood:Other changes; Inhalation-Human TCLo • 200 ppm; Sense Organs and Special Senses:Olfaction:Other changes; Sense Organs and Special Senses:Eye:Conjunctive irritation; Lungs, Thorax, or Respiration:Other changes; Skin-Rabbit LD50 • >1700 mg/kg; Irritation: Eye-Rabbit • 5 mg 24 Hour(s) • Severe irritation; Skin-Rabbit • 500 mg 24 Hour(s) • Moderate irritation; Reproductive: Inhalation-Mouse TCLo • 1 g/m³ 12 Hour(s)(6-15D preg); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus)</i>; <i>Reproductive Effects:Specific Developmental Abnormalities:Musculoskeletal system</i>; Inhalation-Rat TCLo • 50 mg/m³ 6 Hour(s)(1-21D preg); <i>Reproductive Effects:Effects on Fertility:Post-implantation mortality</i>; <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus)</i>; <i>Reproductive Effects:Specific Developmental Abnormalities:Craniofacial (including nose and tongue)</i></p>
Hydrogen sulfide (0% TO 4%)	7783-06-4	<p>Acute Toxicity: Inhalation-Rat LC50 • 444 ppm 4 Hour(s); Irritation: Eye-Human • 0.000125 ppm 5 Hour(s); Reproductive: Inhalation-Rat TCLo • 10 mg/m³ (48D pre/1-22D preg); <i>Reproductive Effects:Effects on Fertility:Pre-implantation mortality</i>; <i>Reproductive Effects:Effects on Fertility:Post-implantation mortality</i>; <i>Reproductive Effects:Specific Developmental Abnormalities:Urogenital system</i></p>
Hexane (0% TO 3%)	110-54-3	<p>Acute Toxicity: Ingestion/Oral-Rat LD50 • 25 g/kg; Inhalation-Rat LC50 • 48000 ppm 4 Hour(s); Irritation: Eye-Rabbit • 10 mg • Mild irritation; Reproductive: Inhalation-Rat TCLo • 5000 ppm (6-19D preg); <i>Reproductive Effects:Specific Developmental Abnormalities:Musculoskeletal system</i>; <i>Reproductive Effects:Specific Developmental Abnormalities:Urogenital system</i></p>
Benzene (0% TO 2%)	71-43-2	<p>Acute Toxicity: Ingestion/Oral-Rat LD50 • 930 mg/kg; Behavioral:Tremor; Behavioral:Convulsions or effect on seizure threshold; Inhalation-Rat LC50 • 10000 ppm 7 Hour(s); Inhalation-Human TCLo • 50 mg/m³ 2 Hour(s); Behavioral:Changes in psychophysiological tests; Behavioral:Muscle weakness; Inhalation-Rat TCLo • 1 ppm 6 Hour(s); Kidney, Ureter, and Bladder:Other changes in urine composition; Skin-Rabbit LD50 • >9400 µL/kg; Irritation: Eye-Rabbit • 2 mg 24 Hour(s) • Severe irritation; Skin-Rabbit • 20 mg 24 Hour(s) • Moderate irritation; Multi-dose Toxicity: Inhalation-Mouse TCLo • 100 ppm 2 Week(s)-Intermittent; Endocrine:Differential effect of sex or castration on observed toxicity; Blood:Leukopenia; Blood:Changes in bone marrow not included above; Inhalation-Mouse TDLo • 100 ppm 6 Hour(s) 10 Day(s)-Intermittent; Blood:Changes in bone marrow not included above; Blood:Changes in platelet count; Mutagen: Dominant lethal test • Ingestion/Oral-Mouse • 1 mg/kg; Cytogenetic analysis • Inhalation-Human • 125 ppm 1 Year (s); Cytogenetic analysis • Inhalation-Human • 0.1 ppm; Sister chromatid exchange • Inhalation-Mouse • 10 ppm 6 Hour (s); Micronucleus test • Inhalation-Rat • 1 ppm 6 Hour(s); Reproductive: Inhalation-Mouse TCLo • 5 ppm (6-15D preg); <i>Reproductive Effects:Effects on Embryo or Fetus:Cytological changes</i>; <i>Reproductive Effects:Specific Developmental Abnormalities:Blood and lymphatic system</i>; Inhalation-Mouse TCLo • 20 ppm 6 Hour(s)(6-15D preg); <i>Reproductive Effects:Specific Developmental Abnormalities:Blood and lymphatic system</i>; Inhalation-Rat TCLo • 670 mg/m³ 24 Hour(s)(15D pre/1-22D preg); <i>Reproductive Effects:Effects on Fertility:Female fertility index</i>; Parenteral-Mouse TDLo • 4 g/kg (12D preg); <i>Reproductive Effects:Effects on Newborn:Weaning or lactation index</i></p>

GHS Properties	Classification
Respiratory sensitization	OSHA HCS 2012 • No data available
Serious eye damage/Irritation	OSHA HCS 2012 • Eye Irritation 2
Acute toxicity	OSHA HCS 2012 • No data available
Aspiration Hazard	OSHA HCS 2012 • Aspiration 1
Carcinogenicity	OSHA HCS 2012 • Carcinogenicity 2
Skin corrosion/Irritation	OSHA HCS 2012 • Skin Irritation 2

Skin sensitization	OSHA HCS 2012 • No data available
STOT-RE	OSHA HCS 2012 • Specific Target Organ Toxicity Repeated Exposure 1; Specific Target Organ Toxicity Repeated Exposure 2
STOT-SE	OSHA HCS 2012 • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects
Toxicity for Reproduction	OSHA HCS 2012 • Toxic to Reproduction 1B
Germ Cell Mutagenicity	OSHA HCS 2012 • Germ Cell Mutagenicity 1B

Potential Health Effects

Inhalation

Acute (Immediate)

- May affect the central nervous system. Symptoms may include dizziness, drowsiness, lethargy, coma and death.

Chronic (Delayed)

- CNS depression has been reported to occur in chronic abusers exposed to high levels of toluene. Symptoms include drowsiness, ataxia, tremors, cerebral atrophy, nystagmus (involuntary eye movements), and impaired speech, hearing, and vision. Neurobehavioral effects have been observed in occupationally exposed workers. Chronic exposure to benzene, a component of this material, results primarily in hematotoxicity, including aplastic anemia, pancytopenia, or any combination of anemia, leukopenia, and thrombocytopenia. Chronic benzene exposure is associated with an increased risk of leukemia.

Skin

Acute (Immediate)

- Causes skin irritation.

Chronic (Delayed)

- No data available.

Eye

Acute (Immediate)

- Causes serious eye irritation.

Chronic (Delayed)

- No data available.

Ingestion

Acute (Immediate)

- Material may be aspirated into lungs during ingestion and/or subsequent vomiting. Aspiration of this material will cause severe lung injury, chemical pneumonitis, pulmonary edema or death.

Chronic (Delayed)

- No data available.

Other

Chronic (Delayed)

- Chronic exposure to Hexane may produce important peripheral neuropathy (motor sensory) and CNS abnormalities.

Mutagenic Effects

- Repeated and prolonged exposure may cause mutagenic effects.

Carcinogenic Effects

- Repeated and prolonged exposure may cause cancer.

Carcinogenic Effects				
	CAS	OSHA	IARC	NTP
Benzene	71-43-2	Specifically Regulated Carcinogen	Group 1-Carcinogenic	Known Human Carcinogen

Reproductive Effects

- Repeated and prolonged exposure may cause reproductive effects.

Key to abbreviations

LC = Lethal Concentration

LD = Lethal Dose

TC = Toxic Concentration

TD = Toxic Dose

Section 12 - Ecological Information

Toxicity

- Non-mandatory section - information about this substance not compiled for this reason.

Persistence and degradability

- Non-mandatory section - information about this substance not compiled for this reason.

Bioaccumulative potential

- Non-mandatory section - information about this substance not compiled for this reason.

Mobility in Soil

- Non-mandatory section - information about this substance not compiled for this reason.

Other adverse effects

- Non-mandatory section - information about this substance not compiled for this reason.

Section 13 - Disposal Considerations

Waste treatment methods

Product waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	UN number	UN proper shipping name	Transport hazard class(es)	Packing group	Environmental hazards
DOT	UN1267	Petroleum crude oil	3	II	NDA
TDG	UN1267	PETROLEUM CRUDE OIL	3	II	NDA

Special precautions for user

- None specified.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

- No data available

Section 15 - Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications

- Acute, Chronic, Fire

Inventory				
Component	CAS	Canada DSL	Canada NDSL	TSCA
Benzene	71-43-2	Yes	No	Yes
Hexane	110-54-3	Yes	No	Yes
Hydrogen sulfide	7783-06-4	Yes	No	Yes
Petroleum	8002-05-9	Yes	No	Yes
Toluene	108-88-3	Yes	No	Yes
Xylene	1330-20-7	Yes	No	Yes

Canada

Labor

Canada - WHMIS - Classifications of Substances

• Hydrogen sulfide	7783-06-4	A, B1, D1A, D2B
• Toluene	108-88-3	B2, D2A, D2B
• Xylene	1330-20-7	B2, D2A, D2B
• Benzene	71-43-2	B2, D2A, D2B
• Hexane	110-54-3	B2, D2A, D2B
• Petroleum	8002-05-9	B2

Canada - WHMIS - Ingredient Disclosure List

• Hydrogen sulfide	7783-06-4	1 %
• Toluene	108-88-3	1 %
• Xylene	1330-20-7	Not Listed
• Benzene	71-43-2	0.1 %
• Hexane	110-54-3	1 %
• Petroleum	8002-05-9	Not Listed

Environment

Canada - CEPA - Priority Substances List

• Hydrogen sulfide	7783-06-4	Not Listed
• Toluene	108-88-3	Priority Substance List 1 (substance not considered toxic)
• Xylene	1330-20-7	Priority Substance List 1 (substance not considered toxic)
• Benzene	71-43-2	Priority Substance List 1 (substance considered toxic)
• Hexane	110-54-3	Not Listed
• Petroleum	8002-05-9	Not Listed

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

• Hydrogen sulfide	7783-06-4	1500 lb TQ
• Toluene	108-88-3	Not Listed
• Xylene	1330-20-7	Not Listed
• Benzene	71-43-2	Not Listed
• Hexane	110-54-3	Not Listed
• Petroleum	8002-05-9	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

• Hydrogen sulfide	7783-06-4	Not Listed
• Toluene	108-88-3	Not Listed
• Xylene	1330-20-7	Not Listed
• Benzene	71-43-2	5 ppm STEL (See 29 CFR 1910.1028, 15 min); 0.5 ppm Action Level; 1 ppm TWA
• Hexane	110-54-3	Not Listed
• Petroleum	8002-05-9	Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

• Hydrogen sulfide	7783-06-4	Not Listed
• Toluene	108-88-3	
• Xylene	1330-20-7	(isomers and mixtures)
• Benzene	71-43-2	(including Benzene from gasoline)
• Hexane	110-54-3	
• Petroleum	8002-05-9	Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• Hydrogen sulfide	7783-06-4	100 lb final RQ; 45.4 kg final RQ
• Toluene	108-88-3	1000 lb final RQ; 454 kg final RQ
• Xylene	1330-20-7	100 lb final RQ; 45.4 kg final RQ
• Benzene	71-43-2	10 lb final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule); 4.54 kg final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule)
• Hexane	110-54-3	5000 lb final RQ; 2270 kg final RQ
• Petroleum	8002-05-9	Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• Hydrogen sulfide	7783-06-4	Not Listed
• Toluene	108-88-3	Not Listed
• Xylene	1330-20-7	Not Listed
• Benzene	71-43-2	Not Listed
• Hexane	110-54-3	Not Listed
• Petroleum	8002-05-9	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• Hydrogen sulfide	7783-06-4	100 lb EPCRA RQ
• Toluene	108-88-3	Not Listed
• Xylene	1330-20-7	Not Listed
• Benzene	71-43-2	Not Listed
• Hexane	110-54-3	Not Listed
• Petroleum	8002-05-9	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• Hydrogen sulfide	7783-06-4	500 lb TPQ
• Toluene	108-88-3	Not Listed
• Xylene	1330-20-7	Not Listed
• Benzene	71-43-2	Not Listed
• Hexane	110-54-3	Not Listed
• Petroleum	8002-05-9	Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• Hydrogen sulfide	7783-06-4	1.0 % de minimis concentration
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• Toluene	108-88-3	1.0 % de minimis concentration
• Xylene	1330-20-7	1.0 % de minimis concentration
• Benzene	71-43-2	0.1 % de minimis concentration
• Hexane	110-54-3	1.0 % de minimis concentration
• Petroleum	8002-05-9	Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

• Hydrogen sulfide	7783-06-4	Not Listed
• Toluene	108-88-3	Not Listed
• Xylene	1330-20-7	Not Listed
• Benzene	71-43-2	Not Listed
• Hexane	110-54-3	Not Listed
• Petroleum	8002-05-9	Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

• Hydrogen sulfide	7783-06-4	Not Listed
• Toluene	108-88-3	Not Listed
• Xylene	1330-20-7	Not Listed
• Benzene	71-43-2	carcinogen, initial date 2/27/87
• Hexane	110-54-3	Not Listed
• Petroleum	8002-05-9	Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

• Hydrogen sulfide	7783-06-4	Not Listed
• Toluene	108-88-3	developmental toxicity, initial date 1/1/91
• Xylene	1330-20-7	Not Listed
• Benzene	71-43-2	developmental toxicity, initial date 12/26/97
• Hexane	110-54-3	Not Listed
• Petroleum	8002-05-9	Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

• Hydrogen sulfide	7783-06-4	Not Listed
• Toluene	108-88-3	7000 µg/day MADL (level represents absorbed dose)
• Xylene	1330-20-7	Not Listed
• Benzene	71-43-2	24 µg/day MADL (oral); 49 µg/day MADL (inhalation)
• Hexane	110-54-3	Not Listed
• Petroleum	8002-05-9	Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• Hydrogen sulfide	7783-06-4	Not Listed
• Toluene	108-88-3	Not Listed
• Xylene	1330-20-7	Not Listed
• Benzene	71-43-2	6.4 µg/day NSRL (oral); 13 µg/day NSRL (inhalation)
• Hexane	110-54-3	Not Listed

• Petroleum	8002-05-9	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Female		
• Hydrogen sulfide	7783-06-4	Not Listed
• Toluene	108-88-3	female reproductive toxicity, initial date 8/7/09
• Xylene	1330-20-7	Not Listed
• Benzene	71-43-2	Not Listed
• Hexane	110-54-3	Not Listed
• Petroleum	8002-05-9	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Male		
• Hydrogen sulfide	7783-06-4	Not Listed
• Toluene	108-88-3	Not Listed
• Xylene	1330-20-7	Not Listed
• Benzene	71-43-2	male reproductive toxicity, initial date 12/26/97
• Hexane	110-54-3	Not Listed
• Petroleum	8002-05-9	Not Listed

Other Information

- **WARNING:** This product contains a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm.

Section 16 - Other Information

Revision Date

- 13/November/2015

Preparation Date

- 30/November/2010

Disclaimer/Statement of Liability

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Key to abbreviations

NDA = No data available