



MATERIAL SAFETY DATA SHEET

Light Sour Crude

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Light Sour Crude
Product Use: Petroleum distillates
Manufacturer/Supplier: NGL Supply Co., Ltd.
550, 435 – 4th Avenue SW
Calgary, Alberta, Canada
T2P 3A8
Phone Number: 403-265-1977
Emergency Phone: 1-800-424-9300 Chemtrec (US)
613-996-6666 CANUTEC (Canada)
Date of Preparation: October 11, 2012

Section 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER

EXTREMELY FLAMMABLE. VERY TOXIC BY INHALATION. HARMFUL IF SWALLOWED. IRRITATING TO EYES. IRRITATING TO SKIN. MAY CAUSE CANCER. MAY CAUSE MUTAGENICITY. MAY CAUSE TERATOGENICITY AND EMBRYOTOXICITY. HARMFUL: MAY CAUSE LUNG DAMAGE IF SWALLOWED.

Potential Health Effects: See Section 11 for more information.

Likely Routes of Exposure: Skin contact, eye contact, inhalation, and ingestion.

Eye: Irritating to eyes.

Skin: Irritating to skin.

Ingestion: Harmful if swallowed. May cause stomach distress, nausea or vomiting.
Harmful: may cause lung damage if swallowed.

Inhalation: Very toxic by inhalation. Irritating to respiratory system. Vapours may cause drowsiness, dizziness, headache, loss of consciousness. May contain small amounts of hydrogen sulphide (H₂S) which can cause irritation of mucous membranes, headaches, dizziness, and nausea at low concentrations. This product may be aspirated into the lungs and cause chemical pneumonitis.

Chronic Effects: Long term exposure to oil mists may cause chronic lung damage. Contains ingredients known or suspected to be carcinogenic, mutagenic, teratogenic and/or embryotoxic.

Signs and Symptoms: Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Vapours may cause drowsiness and dizziness.

Medical Conditions Aggravated By Exposure: Because of its irritating properties, product may aggravate preexisting skin, eye, and respiratory conditions.

Target Organs: Skin, eyes, gastrointestinal tract, respiratory system.

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Environmental Effects: May cause long-term adverse effects in the aquatic environment. See Section 12 for more information.



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Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS #	Wt. %
Petroleum	8002-05-9	90 - 100
Benzene	71-43-2	1 - 5
Toluene	108-88-3	1 - 5
Xylene	1330-20-7	1 - 5
Ethylbenzene	100-41-4	1 - 5
Naphthalene	91-20-3	1 - 5
Hydrogen sulfide	7783-06-4	1 - 5

Sulfur content: > 0.5%

* Due to the nature of the sampling process, different crude samples may contain varying amounts of hazardous chemicals.

Section 4: FIRST AID MEASURES

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical attention immediately.

Skin Contact: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Seek medical attention or call poison control immediately.

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show the label or MSDS where possible).

Note to Physicians: Symptoms may not appear immediately.

Section 5: FIRE FIGHTING MEASURES

Flammability: Flammable by WHMIS/OSHA criteria.

Means of Extinction:

Suitable Extinguishing Media: Powder, foam, carbon dioxide.

Unsuitable Extinguishing Media: Do not use a direct stream of water. .

Products of Combustion: May include, and are not limited to: oxides of carbon, oxides of nitrogen, oxides of sulfur.

Explosion Data:

Sensitivity to Mechanical Impact: Not available.

Sensitivity to Static Discharge: Vapours may be ignited by static discharge.

Protection of Firefighters: Water spray may be ineffective on fire but may protect firefighters and cool closed containers. Vapours can flow to distant ignition sources and flash back. Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition.



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Environmental Precautions: Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.

Methods for Containment: Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for Clean-Up: Scoop up material and place in a disposal container. Provide ventilation.

Other Information: Not available.

Section 7: HANDLING AND STORAGE

Handling:

Keep away from sources of ignition. No smoking. Avoid contact with skin and eyes. Do not swallow. Do not breathe gas/fumes/vapour/spray. Use only in well-ventilated areas. Handle and open container with care. Follow proper bonding and grounding procedures. Use non-sparking equipment and explosion-proof machinery. When using do not eat or drink. Wash hands before eating, drinking, or smoking.

Storage:

Keep out of the reach of children. Keep container tightly closed and dry in a well-ventilated place. Store in a cool place, away from incompatibles and direct sunlight. Hydrogen sulphide (H₂S), an extremely toxic and highly flammable gas, and other flammable light hydrocarbon gases may collect in vapour spaces where product is stored. Empty containers may retain product residue. Do not cut, weld, drill or grind.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Ingredient	Exposure Limits	
	OSHA-PEL	ACGIH-TLV
Petroleum	400 ppm	400 ppm
Benzene	10 ppm	0.5 ppm
Toluene	200 ppm	20 ppm
Xylene	100 ppm	100 ppm
Ethylbenzene	100 ppm	20 ppm
Naphthalene	10 ppm	10 ppm
Hydrogen sulfide	10 ppm; 14 mg/m ³	1 ppm

Engineering Controls: Use ventilation adequate to keep exposures below recommended exposure limits. Use explosion-proof ventilation equipment.

Personal Protective Equipment:

Eye/Face Protection: Wear eye/face protection.

Hand Protection: Wear suitable gloves.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Opaque.

Colour: Brown to black.



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Odour:	Petroleum / rotten egg odour.
Odour Threshold:	Not available.
Physical State:	Liquid.
pH:	Not available.
Viscosity:	Not available.
Freezing Point:	Not available.
Boiling Point:	Not available.
Flash Point:	< -7 °C (< 19 °F) (varies depending on sample)
Evaporation Rate:	Not available.
Lower Flammability Limit:	Not available.
Upper Flammability Limit:	Not available.
Vapor Pressure:	Not available.
Vapor Density:	> 1 (Air = 1)
Specific Gravity:	Not available.
Solubility in Water:	Negligible.
Coefficient of Water/Oil Distribution:	Not available.
Auto-ignition Temperature:	Not available.
Percent Volatile, wt. %:	Not available.
VOC content, wt. %:	Not available.

Section 10: STABILITY AND REACTIVITY

Stability: Stable under normal storage conditions. Keep in a cool place.

Conditions of Reactivity: Heat. Incompatible materials.

Incompatible Materials: Oxidizers. Acids.

Hazardous Decomposition Products: May include, and are not limited to: oxides of carbon, oxides of nitrogen, oxides of sulfur.

Possibility of Hazardous Reactions: No dangerous reaction known under conditions of normal use.

Section 11: TOXICOLOGY INFORMATION

EFFECTS OF ACUTE EXPOSURE

Component Analysis

Ingredient	LD₅₀ (oral)	LC₅₀
Petroleum	> 4300 mg/kg, rat	Not available.
Benzene	1800 mg/kg, rat	13050 - 14380 ppm 4hr, rat 12.5 mg/L 4hr, rat;
Toluene	636 mg/kg, rat	26700 ppm 1hr, rat 5000 ppm 4hr, rat;
Xylene	4300 mg/kg, rat	47635 mg/L 4 hr, rat
Ethylbenzene	3500 mg/kg, rat	17.2 mg/L 4hr, rat
Naphthalene	490 mg/kg, rat	> 340 mg/m ³ 1hr, rat 0.701 mg/L 4hr, rat;
Hydrogen sulfide	Not available.	0.99 mg/L 1hr, rat



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- Eye:** Irritating to eyes. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
- Skin:** Irritating to skin. Symptoms may include redness, edema, drying, defatting and cracking of the skin.
- Ingestion:** Harmful if swallowed. May cause stomach distress, nausea or vomiting. Harmful: may cause lung damage if swallowed.
- Inhalation:** Very toxic by inhalation. Irritating to respiratory system. Vapours may cause drowsiness, dizziness, headaches, loss of consciousness. This product may be aspirated into the lungs and cause chemical pneumonitis.

EFFECTS OF CHRONIC EXPOSURE

- Target Organs:** Not available.
- Chronic Effects:** Not hazardous by WHMIS/OSHA criteria.
- Carcinogenicity:** Hazardous by WHMIS/OSHA criteria.

Ingredient

Chemical Listed as Carcinogen or Potential Carcinogen *

Petroleum	I-3
Benzene	O, G-A1, I-1, N-1, CP65
Toluene	G-A4, I-3, CP65
Xylene	G-A4, I-3
Ethylbenzene	O, G-A3, I-2B, CP65
Naphthalene	G-A4, I-2B, N-2, CP65
Hydrogen sulfide	Not listed.

* See Section 15 for more information.

- Mutagenicity:** Hazardous by WHMIS/OSHA criteria.
- Reproductive Effects:** Not hazardous by WHMIS/OSHA criteria.
- Developmental Effects:**
- Teratogenicity:** Hazardous by WHMIS/OSHA criteria.
 - Embryotoxicity:** Hazardous by WHMIS/OSHA criteria.
- Respiratory Sensitization:** Not hazardous by WHMIS/OSHA criteria.
- Skin Sensitization:** Not hazardous by WHMIS/OSHA criteria.
- Toxicologically Synergistic Materials:** Not available.

Section 12: ECOLOGICAL INFORMATION

- Ecotoxicity:** May cause long-term adverse effects in the aquatic environment.
- Persistence / Degradability:** Not available.
- Bioaccumulation / Accumulation:** Not available.
- Mobility in Environment:** Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions:

This material must be disposed of in accordance with all local, state, provincial, and federal regulations.



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Section 14: TRANSPORTATION INFORMATION

DOT Classification

UN1267; PETROLEUM CRUDE OIL; Class 3; PG I or II
ORM-D, Limited Quantity

TDG Classification

UN1267; PETROLEUM CRUDE OIL; Class 3; PG I or II
Limited Quantity

Section 15: REGULATORY INFORMATION

Federal Regulations

Canada: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

US: MSDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200).

SARA Title III

Ingredient	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313
Petroleum	Not listed.	Not listed.	Not listed.	Not listed.
Benzene	Not listed.	Not listed.	10	313
Toluene	Not listed.	Not listed.	1,000	313
Xylene	Not listed.	Not listed.	100	313
Ethylbenzene	Not listed.	Not listed.	1,000	313
Naphthalene	Not listed.	Not listed.	100	313
Hydrogen sulfide	500	100	100	313s

State Regulations

California Proposition 65:

This product contains chemicals known to the State of California to cause cancer.

This product contains chemicals known to the State of California to cause birth defects or other reproductive harm.

Global Inventories

Ingredient	Canada DSL/NDL	USA TSCA
Petroleum	DSL	Yes.
Benzene	DSL	Yes.
Toluene	DSL	Yes.
Xylene	DSL	Yes.
Ethylbenzene	DSL	Yes.
Naphthalene	DSL	Yes.
Hydrogen sulfide	DSL	Yes.

HMIS - Hazardous Materials Identification System

Health - 2* Flammability - 3 Physical Hazard - 0 PPE - B

NFPA - National Fire Protection Association:

Health - 2 Fire - 3 Reactivity - 0

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme



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WHMIS Classification(s):

- Class B2 - Flammable Liquid
- Class D1A - Very Toxic Material
- Class D2A - Carcinogenicity
- Class D2A - Teratogenicity and Embryotoxicity
- Class D2A - Mutagenicity
- Class D2B - Skin/Eye Irritant

WHMIS Hazard Symbols:



SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

OSHA (O) Occupational Safety and Health Administration.

ACGIH (G) American Conference of Governmental Industrial Hygienists.

- A1 - Confirmed human carcinogen.
- A2 - Suspected human carcinogen.
- A3 - Animal carcinogen.
- A4 - Not classifiable as a human carcinogen.
- A5 - Not suspected as a human carcinogen.

IARC (I) International Agency for Research on Cancer.

- 1 - The agent (mixture) is carcinogenic to humans.
- 2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
- 2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
- 3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
- 4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

NTP (N) National Toxicology Program.

- 1 - Known to be carcinogens.
- 2 - Reasonably anticipated to be carcinogens.

Section 16: OTHER INFORMATION

Disclaimer:

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

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