

MATERIAL SAFETY DATA SHEET

SECTION 1 ♦ PRODUCT AND COMPANY IDENTIFICATION

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TRADE NAMES/SYNONYMS: Naphtha, Sour, Crude Topping Unit Naphtha, Reforming Naphtha	CHEMICAL FAMILY: Naphtha	EPL Code: 12
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This material safety data sheet represents the composite characteristics and properties of fungible petroleum hydrocarbons and other related substances transported by explorer pipeline company. The information presented was compiled from one or more product shipper sources and is intended to provide health and safety guidance for these fungible products. Individual shipper and manufacturer MSDSs are available at Explorer Pipeline Company's, Tulsa, Oklahoma, offices.

SECTION 2 * HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Danger Flammable Liquid!!

- Pale yellow with a petroleum odor;
- Harmful or fatal if swallowed, inhaled or absorbed through skin.
- May cause CNS depression.
- Can produce skin irritation upon prolonged or repeated contact.
- Keep away from heat, sparks and open flame;
- Wash thoroughly after handling;
- Contains petroleum distillates! If swallowed, do not induce vomiting since aspiration into the lungs will cause chemical pneumonia;
- Avoid breathing vapors or mist;
- Use only with adequate ventilation; and
- Obtain prompt medical attention. Keep Out of Reach of Children!

SECTION 3 ▼ COMPOSITION/INFORMATION OF INGREDIENTS

INGREDIENT	CAS NUMBER	PERCENTAGE (%)
Hydrocarbons (Aromatic & Paraffinic)	64741-41-9	± 100%
Benzene	71-43-2	Varies
Hydrogen Sulfide	7783-06-4	0-0.03%

ACUTE

SUMMARY OF ACUTE HAZARDS: May cause transient irritation to eyes and skin. Extreme exposure or aspiration into the lungs may cause chemical pneumonia. Overexposure may cause weakness, headache, nausea, confusion, blurred vision or other CNS effects. Hydrogen sulfide be irritating at low concentrations to the eyes skin and respiratory tract. At higher concentrations, loss of ability to smell hydrogen sulfide, respiratory paralysis and death may occur.

GETTING IT IN YOUR EYE...

- May cause irritation.

GETTING IT ON YOUR SKIN...

- Studies with mice or rats have shown that product may have caused either damage or tumors of the kidneys or

MATERIAL NAME: Heavy Straight Run Naphtha		MSDS # EPL-10
<p>tumors of the liver.</p> <ul style="list-style-type: none"> ➤ May cause irritation. ➤ Prolonged or repeated liquid contact can defat the skin and lead to irritation and/or dermatitis. 		
<p>SWALLOWING IT...</p> <ul style="list-style-type: none"> ➤ May be harmful or fatal if swallowed. 		
<p>BREATHING IT...</p> <ul style="list-style-type: none"> ➤ Extreme overexposure or aspiration into the lungs may cause pneumonia. Overexposure may cause weakness, headache, nausea, confusion, blurred vision, drowsiness, and other nervous system effects. ➤ Inhalation of vapors can produce pulmonary irritation. 		
CHRONIC		
<ul style="list-style-type: none"> ➤ Repeated and prolonged overexposure to vapors can cause benzene toxicity to blood-forming tissues including decreases in blood cells, aplastic anemia or leukemia. ➤ Exposure to such high levels is not likely to be encountered in typical Naphtha stream operations due to relatively low benzene concentrations. ➤ Chronic human health effects would not be expected as long as good personal hygiene and proper safety precautions are practiced. 		
CANCER, REPRODUCTIVE AND GENETIC EFFECTS		
<ul style="list-style-type: none"> ➤ Some components of naphtha, i.e., paraffins and olefins, have been shown to produce a species specific, sex hormonal dependent kidney lesion in male rats from repeated oral or inhalation exposure. The exact relationship between these results and human health is not known. 		
See Toxicological Information (Section 11) For More Information		
SECTION 4 + FIRST AID MEASURES		
<p>EMERGENCY MEDICAL TREATMENT PROCEDURES: Activated charcoal slurry may be administered. To prepare activated charcoal slurry, suspend 50 grams activated charcoal in 400mL water and mix thoroughly. Administer 5mL/kg, or 350 mL for an average adult.</p>		
<p>EYES: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.</p>		
<p>SKIN: In case of contact, immediately wash skin with soap and water. Wash contaminated clothing before reuse. If irritation develops, consult a physician.</p>		
<p>INGESTION: If swallowed, do not induce vomiting. Immediately give two glasses of water. Never give anything by mouth to an unconscious person. Call a physician.</p>		
<p>INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.</p>		
NOTE TO PHYSICIAN: TREAT SYMPTOMATICALLY AND SUPPORTIVELY		
SECTION 5 ⌘ FIRE FIGHTING MEASURES		
<p>Class IA Flammable Liquid. Highly flammable. Products of combustion may contain carbon monoxide, carbon dioxide and other toxic materials. Do not enter enclosed or confined space without proper protective equipment including respiratory protection. May evolve hydrogen sulfide.</p>		
<p>FLASH POINT:(Method Used) 60° - 107°F</p>	<p>FLAMMABLE LIMITS: LEL: <1% UEL: 8%</p>	
<p>AUTOIGNITION TEMPERATURE: 531°F</p>		
<p>EXTINGUISHING MEDIA: Foam, Dry Chemical, Carbon Dioxide</p>		
<p>HAZARDOUS REACTIONS/DECOMPOSITION: Complete and incomplete combustion may produce nitrous oxides and oxides of carbon and sulfur. Polymerization will not occur. May produce nitrous oxides and oxides of carbon and sulfur.</p>		
<p>SPECIAL INSTRUCTIONS: Water may be ineffective, but water should be used to keep fire-exposed containers cool. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop a leak. Water spray may be used to flush spills away from exposures.</p>		

SECTION 6 ❖ ACCIDENTAL RELEASE MEASURES

- Review FIRE AND EXPLOSION HAZARDS and SAFETY PRECAUTIONS before proceeding with clean up.
 - Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean up.
 - Dike spill.
 - Prevent liquid from entering sewers, waterways or low areas.
 - Recover free liquid for reuse or reclamation.
 - Soak up with sawdust, sand, oil dry or other absorbent material.
 - Remove source of heat, sparks, flame, impact, friction, and electricity including internal combustion engines and power tools.
 - If equipment is used for spill cleanup, it must be explosion-proof and suitable for flammable liquid and vapors.
- NOTE: Vapors released from the spill may create an explosive atmosphere.

SECTION 7 ✂ HANDLING AND STORAGE

- Prior to working with this product workers should be trained on its proper handling and storage
- Store in accordance with National Fire Protection Association regulations.
 - Protect against physical damage to containers.
 - Separate from oxidizing materials.
 - Store in cool, well ventilated area of non-combustible construction away from possible sources of ignition.

SECTION 8 # EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Both local exhaust and general room ventilation are usually required in enclosed areas.
OTHER HYGIENIC AND WORK PRACTICES: Emergency eyewash fountains and safety showers should be available in the immediate vicinity of any potential direct exposure. Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using the toilet facilities. Promptly remove soiled clothing. Wash thoroughly before reuse. Shower after work using plenty of soap and water.

EXPOSURE LIMITS

OSHA PEL		ACGIH TLV (2005)	
Naphtha Hydrocarbons (Aromatic & Paraffinic)			
TWA	STEL	TWA	STEL
100 ppm (Coal Tar Naphtha)	Not Applicable (N.A.)	400 ppm (Rubber Solvent)	N.A.
BENZENE			
TWA	STEL	TWA	STEL
1 ppm	5 ppm	0.5 ppm	2.5 ppm
HYDROGEN SULFIDE			
Ceiling	STEL	TWA	STEL
20 ppm	N.A.	10 ppm	15 ppm

PERSONAL PROTECTIVE EQUIPMENT

- **EYES:** Where the possibility of splashing exists, chemical goggles are recommended.
- **SKIN:** Neoprene or NBR recommended protective gloves, coveralls, sleeves, and/or splash aprons.
- **RESPIRATORY PROTECTION:** If exposure may or does exceed occupational exposure limits, use a NIOSH approved respirator to prevent overexposure. In accordance with 29 CFR 1910.134, use either a full-face, air-supplied or air-purifying respirator with organic vapor filters.

SECTION 9 ⚡ PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT (760 MM HG): 95° - 500°F	PERCENT VOLATILE BY VOLUME: 100%
SPECIFIC GRAVITY (H₂O = 1): 0.716 - 0.78 @ 39.2 °F	VISCOSITY UNITS, TEMP: No Data
EVAPORATION RATE (BuAc = 1): Unavailable	VAPOR DENSITY (AIR =1): >1
VAPOR PRESSURE AT 100°F: 1-9 PSI	SOLUBILITY IN WATER: Negligible

MATERIAL NAME: Heavy Straight Run Naphtha		MSDS # EPL-10
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APPEARANCE AND ODOR: Pale yellow with a Petroleum odor.

SECTION 10 ☒ STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable

CONDITIONS TO AVOID: Heat, flame, sparks, strong oxidizing conditions.

OTHER PHYSICAL AND CHEMICAL PROPERTIES: No Data

MATERIALS TO AVOID: Oxidizing agents such as oxygen, chlorine, nitric acid.

HAZARDOUS POLYMERIZATION: Has not been reported

SECTION 11 ☠ TOXICOLOGICAL INFORMATION

BENZENE

Benzene is known to be a human carcinogen based on sufficient evidence in humans. Case reports and case series have reported leukemia (mostly acute myelogenous leukemia) in individuals exposed to benzene. The strongest epidemiological evidence that benzene causes cancer is from several cohort studies in various industries and geographical locations, which found that occupational exposure to benzene, increased the risk of mortality from leukemia.

TOXICITY

Type Of Dose	Specie	Result	Type Of Dose	Specie	Result	Type Of Dose	Specie	Result
LD _{50(oral)}	Mouse	4700 mg/kg	LC _{50(inh)}	Mouse	9980 ppm	TD _{LO(oral)}	Human	50 mg/kg

CARCINOGENICITY

IARC	Sufficient evidence in animals	Sufficient evidence in humans	Group 1: classifiable as a human carcinogen
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NTP	Carcinogen
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California (Prop 65): Listed as carcinogen	NIOSH: Potential Occupational Carcinogen	ACGIH: A1 - Confirmed human carcinogen	OSHA: Select Carcinogen
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MUTAGENICITY, TERATOGENICITY AND REPRODUCTIVE EFFECTS

Repeated or prolonged breathing of benzene vapor has been associated with the development of chromosomal damage in experimental animals and various blood diseases in humans ranging from aplastic anemia to leukemia (a form of cancer). All of these diseases can be fatal. In some individuals, benzene exposure can sensitize cardiac tissue to epinephrine which may precipitate fatal ventricular fibrillation.

No birth defects have been shown to occur in pregnant laboratory animals exposed to doses not toxic to the mother.

SECTION 12 ☼ ECOLOGICAL INFORMATION

ACUTE EFFECTS: No data available on product, however Benzene is considered moderately toxicity to aquatic life. Insufficient data are available to evaluate or predict the short-term effects to birds or land animals.

CHRONIC EFFECTS: No data available on product, however Benzene is considered moderately toxicity to aquatic life. Insufficient data are available to evaluate or predict the long-term effects to birds or land animals.

DISTRIBUTION AND PERSISTENCE IN THE ENVIRONMENT: No Data available.

SECTION 13 ☩ DISPOSAL CONSIDERATIONS

Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Do not flush to surface water or sanitary sewer system. By itself, the liquid is expected to be a RCRA ignitable hazardous waste, when disposed.

SECTION 14 ★ TRANSPORTATION INFORMATION

Not Meant To Be All Inclusive - Check Local, State, And Federal Laws And Regulations

Agency	Shipping Name	Packing Group	Hazard Class	UN/NA #
U.S. DOT	Petroleum Naphtha	I, II, or III	Flammable Liquid	UN 1255

SECTION 15 ☽ REGULATORY INFORMATION

CERCLA RQ's (40 CFR Part 302)	Benzene – 10 pounds
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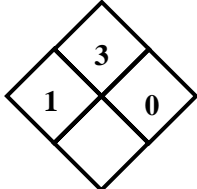
RCRA	Benzene - U019
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SARA (40 CFR Part 355) TPQ's	None of the ingredients are listed
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SARA Title III Section 313	Benzene listed
California's Prop 65	Benzene listed
OSHA	All ingredients are listed as hazardous under 29 CFR 1910.1200

SECTION 16 ☼ OTHER INFORMATION

NFPA 704 LABEL:		HMIS LABEL
		1-3-0


MSDS REVISIONS: Change in Format and update of Information

MSDS CREATION DATE: July 1997	REVISION #1: 07/01/05
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DISCLAIMER

The information in this MSDS was obtained from sources which we believe are reliable. **HOWEVER, THE INFORMATION IS PROVIDED WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS ACCURACY.** Some conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. **FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THE PRODUCT.** All product measurements such as flash point, *etc.* are considered approximate values. All data provided by Explorer Pipeline Company.

This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, such as refined petroleum hydrocarbon mixtures, this MSDS information may not be applicable.

MSDS DEVELOPER: 
Cass Willard, CIH

DATE: 07/01/05