

MATERIAL SAFETY DATA SHEET

SECTION 1 ♦ PRODUCT AND COMPANY IDENTIFICATION

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FOR EMERGENCY SOURCE INFORMATION CONTACT:

- (918) 493 - 5100
- CHEMTREC: (800) 424-9300 (24 hour contact)
- CANUTEC: (613) 996-6666
- SETIQ: 91-800-00214

TRADE NAMES/SYNONYMS:

Methyl Benzene, HUF/Toluene

CHEMICAL FAMILY: Aromatics

EPL Code: 19

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

Flammable Liquid!!

- Clear, water-white liquid with aromatic odor.
- Causes eye and skin irritation;
- Harmful or fatal if swallowed and/or aspirated in to the lungs;
- Causes central nervous system depression at high vapor concentrations; and
- Obtain prompt medical attention. Keep Out of Reach of Children!

SECTION 3 ▼ COMPOSITION/INFORMATION OF INGREDIENTS

INGREDIENT
CAS NUMBER
PERCENTAGE (%)

Toluene

108-88-3

>95%

ACUTE

SUMMARY OF ACUTE HAZARDS: Liquid, mist, or vapors can cause eye, skin, and respiratory tract irritation and CNS depression. Aspiration into the lungs will cause chemical pneumonia.

GETTING IT IN YOUR EYE...

- Causes eye irritation.

GETTING IT ON YOUR SKIN...

- Practically nontoxic by skin absorption. Repeated and prolonged contact defats the skin and can result in dermatitis.
- Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.

SWALLOWING IT...

- Harmful or fatal if aspired into lungs after ingestion.

BREATHING IT...

- Can be harmful if high concentrations are inhaled.
- Irritation of upper respiratory tract, headaches, loss of memory, loss of appetite, nausea, drowsiness, palpitation, muscular weakness, and even death can occur.
- Inhalation of very high levels can produce cardiac sensitization, which may cause fatal changes in heart rhythms.
- Aspiration of this product into the lungs can cause chemical pneumonia and can be fatal. Aspiration into the lungs can occur while vomiting after ingestion of this product.

CHRONIC

- Reports of chronic poisoning describe anemia, decreased blood cell count and bone marrow hypoplasia. Liver and kidney damage may occur. Repeated or prolonged contact has a defatting action, causing drying, redness, dermatitis. Exposure to toluene may affect the developing fetus..

CANCER, REPRODUCTIVE AND GENETIC EFFECTS

- Same as above.

See Toxicological Information (Section 11) For More Information

SECTION 4 + FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes, then get prompt medical attention.

SKIN: Wash exposed skin with soap and water. Remove contaminated clothing and thoroughly clean and dry before reuse.

INGESTION: If swallowed, do NOT induce vomiting. Get immediate medical attention.

INHALATION: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

NOTE TO PHYSICIAN: TREAT SYMPTOMATICALLY AND SUPPORTIVELY

SECTION 5 ⌘ FIRE FIGHTING MEASURES

Flammable liquid. Vapor may explode if ignited in enclosed area.

FLASH POINT:(Method Used) 40°F

FLAMMABLE LIMITS:

LEL: 1.1%

UEL: 7.1%

AUTOIGNITION TEMPERATURE: 997°F

EXTINGUISHING MEDIA: Agents approved for Class B hazards (i.e., dry chemical, carbon dioxide, halogenated agents, foam, steam) or water fog.

HAZARDOUS REACTIONS/DECOMPOSITION: None. Polymerization will not occur. Incomplete burning can produce carbon monoxide, carbon dioxide, and other harmful products.

SPECIAL INSTRUCTIONS: For fires involving this material, do not enter any enclosed or confined space without proper protective equipment. This may include self-contained breathing apparatus to protect against the hazardous effects of combustion products and oxygen deficiencies. If firefighters cannot work upwind to the fire, respiratory protective equipment must be worn. Cool tanks and containers exposed to fire with water. Burning liquid will float on water. Notify appropriate authorities if liquid enters sewer/waterways.

SECTION 6 ❖ ACCIDENTAL RELEASE MEASURES

- Remove or shut off all sources of ignition. Remove mechanically or contain on an absorbent material. Keep out of sewers and waterways.

SECTION 7 ✂ HANDLING AND STORAGE

Prior to working with this product workers should be trained on its proper handling and storage

- Store in flammable liquids storage area. Store away from heat, ignition sources, and open flame in accordance with applicable federal, state, or local regulations, Keep container closed.

SECTION 8 # EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Use adequate ventilation to keep vapor concentration of this material below the occupational exposure limits shown below in Section VI.

OTHER HYGIENIC AND WORK PRACTICES: Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using 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)				
TOLUENE								
TWA		CEILING		TWA		STEL		
200 ppm		300 ppm 500 ppm- for 10 minutes		50 ppm		Not Applicable (N.A.)		
PERSONAL PROTECTIVE EQUIPMENT								
<ul style="list-style-type: none"> EYES: Do not get in eyes. Wear chemical goggles. SKIN: Avoid skin contact. Wear protective clothing and gloves. RESPIRATORY PROTECTION: Do not breathe mist or vapor. Use with adequate ventilation. If ventilation is inadequate, use NIOSH/MSHA certified respirator which will protect against organic vapor/mist. 								
SECTION 9 ⚡ PHYSICAL AND CHEMICAL PROPERTIES								
BOILING POINT (760 MM HG): 231°F				PERCENT VOLATILE BY VOLUME: 100%				
SPECIFIC GRAVITY (H₂O = 1): 0.87 @ 39.2 °F				VISCOSITY UNITS, TEMP: 0.59 cp @ 20°C				
FREEZING POINT: -95 °F				VAPOR DENSITY (AIR =1): 3.2				
VAPOR PRESSURE AT 25°C: 26 mm Hg				SOLUBILITY IN WATER: Negligible				
APPEARANCE AND ODOR: Clear, water-white liquid; aromatic odor.								
SECTION 10 ⚡ STABILITY AND REACTIVITY								
CHEMICAL STABILITY: Stable								
CONDITIONS TO AVOID: Keep away from ignition sources (e.g., heat, sparks, and open flames).								
OTHER PHYSICAL AND CHEMICAL PROPERTIES: No Data.								
MATERIALS TO AVOID: Strong oxidizers such as liquid chlorine and oxygen.								
HAZARDOUS POLYMERIZATION: Not expected to occur.								
SECTION 11 ☠ TOXICOLOGICAL INFORMATION								
This material is a blending stock for petroleum fuels. Do not use as a cleaning agent or as a solvent.								
TOLUENE								
Poison by intraperitoneal route. Moderately toxic by intravenous, subcutaneous and possibly other routes. Mildly toxic by inhalation. An experimental teratogen. Human systemic effects by inhalation. Experimental reproductive effects. Mutagenic data. A human eye irritant. An experimental skin and severe eye irritant. In the few cases of acute poisoning reported, the effect has been that of a narcotic, the workman passing through a stage of intoxication into one of coma. Recovery following removal from exposure has been the rule.								
TOXICITY								
Type Of Dose	Specie	Result	Type Of Dose	Specie	Result	Type Of Dose	Specie	Result
LD ₅₀ (oral)	Rat	636 mg/kg	LC ₅₀ (inh)	Mouse	5320 ppm	LD _{LO} (oral)	Human	50 mg/kg
CARCINOGENICITY								
IARC	Inadequate evidence in animals		Inadequate evidence in humans		Group 3: not classifiable as a human carcinogen			
NTP	Not Listed							
California (Prop 65): Listed as carcinogen	NIOSH: Not Listed			ACGIH: A4-Not Classifiable As Human Carcinogen		OSHA: Possible Select Carcinogen		
MUTAGENICITY, TERATOGENICITY AND REPRODUCTIVE EFFECTS								
Specific developmental abnormalities included craniofacial effects involving the nose and tongue, musculoskeletal effects, urogenital and metabolic effects in studies on mice and rats by the inhalation and oral routes of exposure. Some evidence of fetotoxicity with reduced fetal weight and retarded skeletal development has been reported in								

mice and rats.

Effects on fertility such as abortion were reported in rabbits by inhalation. Paternal effects were noted in rats by inhalation. These effects involved the testes, sperm duct and epididymis.

SECTION 12 * ECOLOGICAL INFORMATION

ACUTE EFFECTS: No information available.

CHRONIC EFFECTS: No information available.

DISTRIBUTION AND PERSISTENCE IN THE ENVIRONMENT: Toluene evaporates when exposed to air. It dissolves only slightly when mixed with water. Most direct releases of toluene to the environment are to air. Toluene also evaporates from water and soil exposed to air. Once in air, toluene breaks down to other chemicals. Microorganisms that live in water and in soil can also break down toluene. Because it is a liquid that does not bind well to soil, toluene that makes its way into the ground can move through the ground and enter groundwater. Plants and animals are not likely to store toluene.

SECTION 13 † DISPOSAL CONSIDERATIONS

Disposal must be in accordance with applicable federal, state or local regulations. Residues and spilled material are hazardous waste due to ignitability. Incineration at an EPA-permitted hazardous waste management facility as required by law. Do not landfill. Residues and spilled material are hazardous waste.

SECTION 14 ★ TRANSPORTATION INFORMATION

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

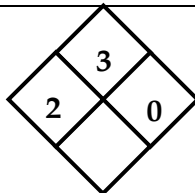
Agency	Shipping Name	Packing Group	Hazard Class	UN/NA #
U.S. DOT	Toluene	II	Flammable Liquid	UN 1294

SECTION 15 › REGULATORY INFORMATION

CERCLA RQ's (40 CFR Part 302)	Toluene - 1,000 pounds
RCRA	Toluene - U220
SARA (40 CFR Part 355) TPQ's	None of the ingredients are listed
SARA Title III Section 313	All ingredients listed
California's Prop 65	All ingredients listed
OSHA	All ingredients are listed as hazardous under 29 CFR 1910.1200

SECTION 16 ⚙ OTHER INFORMATION

NFPA 704 LABEL:



HMIS LABEL

2-3-0

MSDS REVISIONS: Change in Format and update of Information


MSDS CREATION DATE: July 1997

REVISION #1: 01/03/06

DISCLAIMER

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MSDS DEVELOPER:


Cass Willard, CIH

DATE: 01/03/06