

MATERIAL SAFETY DATA SHEET

SECTION 1 ♦ PRODUCT AND COMPANY IDENTIFICATION

Explorer Pipeline Company
6846 South Canton
P.O. Box 2650
Tulsa, Oklahoma 74101

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:

Transmix Gasoline, Naphtha, Fuel Oil, and Jet Fuel Mixed

CHEMICAL FAMILY: Petroleum Hydrocarbons

EPL Code: 90, 91, 92, 97

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 Extremely Flammable!!

- Transparent, light red to light straw or orange-tinted liquid; petroleum naphtha odor;
- May be harmful if inhaled or absorbed through skin;
- Irritating and poisonous gases are produced if involved in fire;
- Keep away from heat, sparks and open flame;
- May cause irritation to eyes, skin, and respiratory system;
- Avoid liquid, mist and vapor contact;
- Wash thoroughly after handling;
- Avoid breathing vapors or mist;
- Use only with adequate ventilation;
- Long-term exposure to completely vaporized gasoline has caused cancer in laboratory animals;
- Vapors or liquid penetration of skin can cause central nervous system (CNS) depression and/or other body systems;
- Harmful or fatal if swallowed;
- Contains petroleum distillates! If swallowed, do not induce vomiting since aspiration into the lungs will cause chemical pneumonia; and
- Obtain prompt medical attention. Keep Out of Reach of Children!

SECTION 3 ▼ COMPOSITION/INFORMATION OF INGREDIENTS

INGREDIENT	CAS NUMBER	PERCENTAGE (%)
Petroleum Distillates	8006-61-9	>95%
Methyl-t-Butyl Ether	1634-04-4	0.00 - 19.99
Toluene	108-88-3	3.00 - 9.99
Benzene	71-43-2	<4.9%
Xylenes	1330-20-7	3.0 - 9.99
1, 2, 4-Trimethylbenzene	95-63-6	1.0 - 2.99
Ethylbenzene	100-41-4	1.0 - 2.99
N-Hexane	110-54-3	1.0 - 2.99
May contain gum inhibitors, dyes and other additives	Mixture	<0.1%

ACUTE

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

GETTING IT IN YOUR EYE...

- Mild eye irritation may result from contact with liquid, mist, and/or vapors.

GETTING IT ON YOUR SKIN...

- Liquid can penetrate skin to cause central nervous system depression.
- Vapor penetration can also cause systematic effects.
- Skin irritation or more serious disorders may occur upon prolonged and repeated contact due to skin defatting.

SWALLOWING IT...

- Irritation of the mouth, throat, and gastrointestinal tract leading to nausea, vomiting, diarrhea and restlessness.
- CNS Depression similar to that caused by vapor inhalation.

BREATHING IT...

- Exposure can cause irritation to the nose, throat, and lungs and signs of CNS depression (dizziness, drowsiness, loss of coordination, coma and death), depending on the concentration/duration of exposure

CHRONIC

- Long-term exposure to unleaded gasoline has also produced kidney damage in laboratory animals. The exact relationship between these results and possible human effects is not known.
- Persons with pre-existing skin disorders, impaired liver or kidney function, or CNS and chronic respiratory diseases should avoid exposure to this material.

CANCER, REPRODUCTIVE AND GENETIC EFFECTS

- An A.P.I.- sponsored study has shown that rats and mice developed cancer following chronic inhalation exposure to the vapors of unleaded gasoline.
- This material may contain benzene at concentrations above 0.1%. Benzene is considered to be a known human carcinogen by OSHA, IARC and NTP. There is limited evidence suggesting that Xylene and Ethyl Benzene may damage the fetus.

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, occasionally lifting the upper and lower lids, Get Medical Aid

SKIN: Quickly remove contaminated clothing and immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

INGESTION: Do not induce vomiting. Call a physician and/or transport to an emergency facility immediately.

INHALATION: Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration (CPR). If breathing is difficult, give oxygen.

NOTE TO PHYSICIAN: TREAT SYMPTOMATICALLY AND SUPPORTIVELY

SECTION 5 ⌘ FIRE FIGHTING MEASURES

EXTREMELY FLAMMABLE! This material releases vapors at or below ambient temperatures. When mixed with air in certain proportions and exposed to an ignition source, these vapors can burn in the open or explode in confined spaces. Being heavier than air, flammable vapors may travel long distances along the ground before reaching a point of ignition and flashing back.

FLASH POINT:(Method Used) -45° - 130 °F

FLAMMABLE LIMITS:

LEL: 0.5%
UEL: 7.6%

AUTOIGNITION TEMPERATURE: 495-853 °F

EXTINGUISHING MEDIA: Water fog, dry chemical, foam, or Carbon Dioxide (CO₂). Use water spray to cool nearby containers and structure exposed to fire. Water fog or spray are of value in cooling tanks and containers but may not achieve extinguishment.

HAZARDOUS REACTIONS/DECOMPOSITION: Burning or excessive heating may produce carbon monoxide and carbon dioxide, also other harmful gases/vapors including oxides and/or other compounds of chlorine, manganese, and bromine.

SPECIAL INSTRUCTIONS: For fires involving this material, do not enter any enclosed or confined fire 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

- Contain spill.
- Remove all ignition sources and safely stop flow of spill.
- Evacuate all non-essential personnel. Use proper protective equipment.
- Blanket with foam or use water fog to disperse vapors.
- Pads and absorbent material can be used.
- Gasoline will float on water and resulting runoff may create an explosion or fire hazard.
- Comply with all applicable laws.
- Spills may need to be reported to the National Response Center (800/424-8802) and other local, state or federal agencies.
- Gasoline or contaminated materials may be hazardous to human and other life.

SECTION 7 ✕ HANDLING AND STORAGE

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

- For use only as a fuel. Do not use product as a cleaning agent.
- Store and transport in accordance with all applicable laws.
- Keep away from heat, sparks, and open flame!
- Keep containers closed and out of closed vehicles.
- Containers should be able to withstand pressures expected from warming or cooling in storage. Ground all drums and transfer vessels when handling.
- All electrical equipment in gasoline storage and/or handling areas should be installed in accordance with applicable requirements of the National Electrical Code, N.F.P.A.
- Keep out of reach of children! Empty containers retain some liquid/vapor residues; hazard precautions must be observed when handling empties.
- Use of any hydrocarbon fuel in spaces without adequate ventilation may result in generation of hazardous levels of vapor and/or inadequate oxygen levels.

SECTION 8 ⊕ EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Local exhaust ventilation may be necessary to control any air contaminants to within there exposure limits (see below) during the use of this product

OTHER HYGIENIC AND WORK PRACTICES: Use good personal hygiene practices. In case of skin contact, wash with mild soap and water or a waterless hand cleaner. Immediately remove soaked clothing and wash thoroughly before reuse. Discard gasoline-soaked shoes. Control occupational exposure below the 0.5 ppm Benzene Permissible Exposure Limit (PEL) Action Level rather than the 300 PPM gasoline Threshold Limit Value –Time Weighted Average (TLV-TWA). Never siphon gasoline by mouth.

EXPOSURE LIMITS

OSHA PEL		ACGIH TLV (2005)	
METHYL TERT BUTYL ETHER			
TWA	STEL	TWA	STEL
Not Applicable (N.A.)	N.A.	50 ppm	N.A.
BENZENE			
TWA	STEL	TWA	STEL
1 ppm	5 ppm	0.5 ppm	2.5 ppm

XYLENE			
TWA	STEL	TWA	STEL
100 ppm	N.A.	100 ppm	150 ppm
ETHYL BENZENE			
TWA	STEL	TWA	STEL
100 ppm	N.A.	100 ppm	125 ppm
N-HEXANE			
TWA	STEL	TWA	STEL
500 ppm	N.A.	50 PPM	N.A.
TOLUENE			
TWA	CEILING	TWA	STEL
200 ppm	300 ppm	50 ppm	N.A.
1, 2, 4 TRIMETHYLBENZENE			
TWA	CEILING	TWA	STEL
N.A.	N.A.	25 ppm	N.A.
PERSONAL PROTECTIVE EQUIPMENT			
<ul style="list-style-type: none"> ➤ EYES: Eye protection (ANSI Z87.1 approved) should be worn whenever there is a likelihood of misting or splashing/spraying liquid. Suitable eyewash station should be available. Contact lenses must not be worn. ➤ SKIN: Avoid prolonged and/or repeated skin contact. If conditions or frequency of use make contact likely, wear clean and impervious protective clothing such as gloves, boots, and facial protection. ➤ RESPIRATORY PROTECTION: A NIOSH approved air purifying respirator (APR) with properly selected cartridges may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by APRs is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known or any other circumstances where APRs may not provide adequate protection. 			
SECTION 9 ⚡ PHYSICAL AND CHEMICAL PROPERTIES			
BOILING POINT (760 MM HG): 70-690 °F		PERCENT VOLATILE BY VOLUME: Slight - 100%	
SPECIFIC GRAVITY (H₂O = 1): 0.71-0.93 (39.2 °F)		VISCOSITY UNITS, TEMP: < 1.4 cSt@37.7°C-3 cSt@100 °C	
EVAPORATION RATE (BuAc = 1): Unavailable		VAPOR DENSITY (AIR =1): 3-5	
VAPOR PRESSURE AT 25°C: 1 - 760 mm Hg		SOLUBILITY IN WATER: 0.1 - 1% at 77 °F (25 °C)	
APPEARANCE AND ODOR: Transparent, light red to light straw or orange-tinted liquid; petroleum naphtha odor.			
SECTION 10 ⚡ STABILITY AND REACTIVITY			
CHEMICAL STABILITY: Stable under normal temperatures and pressures			
CONDITIONS TO AVOID: Avoid open Flames, welding arcs or other high temperatures.			
OTHER PHYSICAL AND CHEMICAL PROPERTIES: If uninhibited, gasoline will cause rusting of copper and alloys containing copper.			
MATERIALS TO AVOID:			
➤ Strong acids, Alkalis, and Oxidizers such as liquid chlorine and oxygen.			
HAZARDOUS POLYMERIZATION: Has not been reported			
SECTION 11 ☠ TOXICOLOGICAL INFORMATION			
The variable composition makes it impossible to set a specific exposure limit for all compositions of this material. Specific exposure limits for potential components such as benzene should be applied based on air monitoring to assure employees are not exposed to excessive vapor levels of components individually or collectively.			

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
NTP	Carcinogen		
California (Prop 65): Listed as carcinogen	NIOSH: Potential Occupational Carcinogen	ACGIH: A1 - Confirmed human carcinogen	OSHA: Select Carcinogen

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.

METHYL TERT BUTYL ETHER (MTBE)

Acute symptoms associated with human exposure to MTBE appear to be mild and transient. Breathing small amounts of MTBE for short periods may cause nose and throat irritation. In laboratory studies, rodents exposed to high doses of MTBE exhibited blood chemistry changes and liver and kidney abnormalities.

TOXICITY

Type Of Dose	Specie	Result	Type Of Dose	Specie	Result	Type Of Dose	Specie	Result
LD ₅₀ (oral)	Mouse	3,500 mg/kg	LC ₅₀ (inh)	Mouse	35,000 ppm	LD _{LO} (oral)	Human	No Data Available

CARCINOGENICITY

IARC	Sufficient evidence in animals	Inadequate evidence in humans	Group 3: Possible human carcinogen
NTP	Not identified as a Know Carcinogen or Anticipated Human Carcinogen		
California (Prop 65): Listed as carcinogen	NIOSH: Not Listed	ACGIH: A3 – Confirmed Animal	OSHA: not classifiable as a human carcinogen

MUTAGENICITY, TERATOGENICITY AND REPRODUCTIVE EFFECTS

In laboratory studies, MTBE vapor exposure at the high dose concentration was associated with an increased incidence of liver tumors in female mice. Also, at high dose concentration exposures, MTBE was associated with an increased incidence of kidney and testicular (Leydig cell) tumors in male rats. There is no evidence that MTBE causes cancer in humans.

XYLENE

Moderate via inhalation and oral routes

TOXICITY

Type Of Dose	Specie	Result	Type Of Dose	Specie	Result	Type Of Dose	Specie	Result
LD ₅₀ (oral)	Mouse	4300 mg/kg	LC ₅₀ (inh)	Rat	5000 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	Suspect Carcinogen		
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

No information available.

ETHYL BENZENE

Moderate via irritation to the skin, eyes and mucous membranes, and via oral and inhalation routes. A concentration of 0.19% vapor in air will irritate eyes; 0.2% is extremely irritating.

TOXICITY								
Type Of Dose	Specie	Result	Type Of Dose	Specie	Result	Type Of Dose	Specie	Result
LD ₅₀ (oral)	Rat	3500 mg/kg	LC _{Lo} (inh)	Rat	4000 ppm	TC _{Lo} (inh)	Human	100 ppm

CARCINOGENICITY					
IARC Not listed	NTP Not listed	California (Prop 65) Listed	NIOSH Not listed	ACGIH Not listed	OSHA Not listed

MUTAGENICITY, TERATOGENICITY AND REPRODUCTIVE EFFECTS

No information available.

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	5000 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.

N-HEXANE

Hexane is an anesthetic. Ingestion may cause nausea, vertigo bronchial, intestinal irritation and CNS depression. Acute inhalation may cause euphoria, dizziness and numbness of limbs.

TOXICITY		
Type Of Dose	Specie	Result
LD _{50(oral)}	Rat	24-49 mg/kg

SKIN IRRITATION: No data available	EYE IRRITATION: No data available
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CARCINOGENICITY					
IARC	NTP	California(Prop 65)	NIOSH	ACGIH	OSHA
Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

MUTAGENICITY, TERATOGENICITY AND REPRODUCTIVE EFFECTS

➤ No data available

SECTION 12 ✳ ECOLOGICAL INFORMATION

ACUTE EFFECTS: Ingredients range from moderate (Benzene, MTBE) to high (Xylene) toxicity to aquatic life. Insufficient data are available to evaluate or predict the short-term effects to birds or land animals.

CHRONIC EFFECTS: Ingredients range from moderate (Benzene, MTBE) to high (Xylene) 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: Xylene is non-persistent in water, with a half-life of less than 2 days. About 99.3% of Xylene will eventually end up in water; about 0.5% will end up in water; about 0.1%, respectively will end up in terrestrial soils and in aquatic sediments.

SECTION 13 ✚ DISPOSAL CONSIDERATIONS

Maximize product recovery for reuse. Dispose of product, contaminated material, and storage tank water bottoms as an EPA "Ignitable hazardous waste" (D001), unless proven otherwise. Use approved treatment, transporters, and disposal sites in compliance with all laws. Spill material is biodegradable if gradually exposed to microorganisms.

SECTION 14 ★ TRANSPORTATION INFORMATION

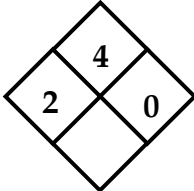
Not Meant To Be All Inclusive - Check Local, State, And Federal Laws And Regulations

Agency	Shipping Name	Packing Group	Hazard Class	UN/NA #
U.S. DOT	Flammable Liquid, N. O. S	II	3	UN 1993

SECTION 15 ⤵ REGULATORY INFORMATION

CERCLA RQ's (40 CFR Part 302)	MTBE - 1,000 pounds	Benzene – 10 pounds
	Xylene - 100 pounds	Ethyl Benzene - 1,000 pounds
	Toluene - 1,000 pounds	n-Hexane - 5,000 pounds
RCRA	Benzene - U019	
	Xylene - U239	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

<p>NFPA 704 LABEL:</p> <div style="text-align: center;">  </div>	<p style="text-align: center;">HMIS LABEL</p> <p style="text-align: center; font-size: 1.2em;">2-4-0</p>
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MSDS REVISIONS: Change in Format and update of Information	
MSDS CREATION DATE: July 1997	REVISION #1: 01/03/06

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: _____

A handwritten signature in black ink that reads "Cass Willard".

Cass Willard, CIH

DATE: 01/03/06