

## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

El Paso Corporation  
and its subsidiaries  
1001 Louisiana Street  
Houston, Texas 77002

Information: (713) 420-2600  
CHEMTREC: (800) 424-9300

**Product Name:** Natural Gas  
MSDS Number: A0004.msds

Last Revision: 06/26/07  
Date Prepared: 09/02/97

**Synonyms:** Marsh Gas

**Product Description:** Methane, Methyl Hydride, Aliphatic Hydrocarbon.

### 2. COMPOSITION & INFORMATION ON INGREDIENTS

Product/ Components	CAS No.	Wt% <sup>(4)</sup>	Occupational Exposure Limits			Units
			OSHA <sup>(1)</sup>	ACGIH <sup>(1)</sup>	NIOSH <sup>(2)</sup>	
Natural Gas	Mixture	100	N/A	N/A	N/A	N/A
Methane	74-82-8	60-95 <sup>(4)</sup>	N/A	1000	N/A	ppm
Ethane	74-84-0	1-60	Simple asphyxiant <sup>(3)</sup>	1000	N/A	ppm
Propane	74-98-6	20-60	1000	1000	1000	ppm
n-Butane	106-97-8	2-5	800 <sup>(3)</sup>	1000	800	ppm
iso-Butane	75-28-5	0-4	N/A	1000	800	ppm
n-Pentane	109-66-0	5-25	600 <sup>(3)</sup>	600	120	ppm
iso-Pentane	78-78-4	0-2	1000	600	N/A	ppm
n-Hexane	110-54-3	2-13	50 <sup>(3)</sup>	50	50	ppm
iso-Hexane	107-83-5	0-2	500 1000 <sup>STEL(3)</sup>	500 1000 <sup>STEL</sup>	100	ppm
Nitrogen	7727-37-9	0-15	Simple Asphyxiant <sup>(3)</sup>	Simple asphyxiant	N/A	ppm
Carbon dioxide	124-38-9	0-5	5,000 30,000 <sup>STEL(3)</sup>	5,000 30,000 <sup>STEL</sup>	5,000 30,000 <sup>STEL</sup>	ppm

<sup>(1)</sup>8-hour TWA unless otherwise specified.

<sup>(2)</sup>10-hour TWA unless otherwise specified.

<sup>(3)</sup>Vacated 1989 PEL. The manufacturer has included this data for informational purposes since these values were vacated in 1992.

<sup>(4)</sup>Normal composition ranges are shown. Exceptions may occur depending upon the source of the gas. Methane is the principal component.

### 3. HAZARD IDENTIFICATION

Note: This product has not been tested by El Paso Corporation to determine its specific health hazards. Therefore, the information provided in this section includes health

hazard information on the product components.

<b>Carcinogenicity:</b>	<b>NTP</b>	<b>IARC Monographs</b>	<b>OSHA Regulated</b>
	No	No	No

**Potential Health Effects from Overexposure:**

**Acute Effects:**

**Eyes:** Natural gas is generally non-irritating to the eyes. Pressurized gas can cause mechanical injury to the eye. Contact with the liquefied gas may cause frostbite of the eye and surrounding tissue.

**Skin:** Contact with liquefied gas may cause frostbite.

**Inhalation:** Causes drowsiness, excitation or unconsciousness due to asphyxiant properties of this gas.

**Ingestion:** Not Applicable.

**Chronic Effects:**

Not determined.

**Additional Medical and Toxicological Information:**

Contact with full strength or dilute formulations of this product or exposure above and below exposure limits may aggravate pre-existing dermatitis or respiratory disorders in certain individuals. Isobutane and n-butane have been found to cause mild cardiac sensitization in laboratory test animals.

**4. FIRST AID MEASURES**

**Eye Contact:** Normally not a concern. If liquefied gas contacts the eye, immediately flush the area with tepid water. Get medical attention by calling 911.

**Skin Contact:** Promptly flush the affected area with tepid water. If freeze burns have occurred, apply bulky, dry sterile bandage to protect area. Get medical attention by calling 911.

**Inhalation:** Remove to fresh air. If breathing has stopped, apply artificial respiration. Get medical attention by calling 911.

**Ingestion:** Not considered necessary.

**Medical Providers:** Medical providers are urged to contact a Regional Poison Center at 1-800-222-1222.

## 5. FIRE FIGHTING MEASURES

Flash Point: -306°F

Flammable Limits in Air, % by Volume:

Lower: 4.0

Upper: 15.0

Autoignition Temperature: 1004°F

Extinguishing Media: Dry chemical, foam, or carbon dioxide.

NFPA Ratings: Health: 1                      Flammability: 4                      Reactivity: 0

### General Hazard:

Vapors may reach an ignition source, and flashback. It can be a dangerous fire and explosion hazard when mixed with air.

### Fire Fighting Instructions:

Water may be ineffective on flames but should be used to keep fire -exposed containers cool. Extinguish fire by stopping the flow of gas. Keep the surrounding areas cool by using water mists. Avoid solid water streams. Firefighters should wear self-contained breathing apparatus and full protective clothing.

### Special Fire Fighting Instructions

BLEVE'S (Boiling Liquid Expanding Vapor Explosions) can occur when a liquid in a pressurized container is heated to temperatures beyond its boiling point. This can lead to failure of the container and damage to the surrounding area.

## 6. ACCIDENTAL RELEASE

Eliminate sources of heat or ignition including internal combustion engines and power tools. Stop gas flow. If indoors, ventilate the affected areas, downwind areas first.

Leaking containers should be moved outdoors the contents transferred to an appropriate container. Note: Large releases may require the notification of local emergency response agencies. Advise authorities and the National Response Center (1-800-424-8802) if the release is to a watercourse. Wear self-contained breathing apparatus if conditions warrant.

## 7. HANDLING & STORAGE

Store and use natural gas cylinders and tanks in well-ventilated areas, away from direct sunlight and sources of ignition. No smoking in areas of storage or use. Electrically bond all lines and equipment used with natural gas. Keep away from incompatible agents and from cylinders of oxygen.

## 8. EXPOSURE CONTROL, PERSONAL PROTECTION

Eye Protection: Safety glasses or face shields are required when working with pressurized lines or cylinders. Wear chemical goggles when working with liquid natural gas.

Skin Protection: Insulated clothing and/or gloves should be worn where liquid or expanding gas may be generated.

Inhalation: Self-contained breathing apparatus should be available for emergency use.

Ventilation: Provide adequate general and local ventilation: (1) to maintain airborne chemical concentrations below applicable exposure limits, (2) to prevent accumulation of flammable vapors and formation of explosive atmospheres, and (3) to prevent formation of oxygen deficient atmospheres, especially in confined spaces. [Note: this product may displace oxygen in enclosed areas.]

## 9. PHYSICAL & CHEMICAL PROPERTIES

Boiling Point @ 1 atm: -258 °F	Melting Point: N/A
Vapor Pressure mmHg @100°F: N/A	Vapor Density (Air=1):0.6
% Solubility in H <sub>2</sub> O: Slight	pH: N/A
Specific Gravity @ 68 °F & 1 atm: 0.6-0.7	Evaporation Rate N/A
% Volatile by Volume: 100	Molecular Wt.: 19.5
Viscosity (method, temp.): N/A	
Appearance: Gas	Odor: Odorless, tasteless

## 10. STABILITY & REACTIVITY

**Stability:** Stable under normal conditions of use.

**Hazardous Polymerization:** Will not occur.

**Conditions to Avoid/Incompatibilities:** Strong oxidizing agents, chlorine, bromine, pentafluoride, nitrogen trifluoride, heat, sparks, flame, build-up of static electricity.

**Hazardous Decomposition Products:** Carbon monoxide and carbon dioxide.

## 11. TOXICOLOGICAL INFORMATION

No data available.

## 12. ECOLOGICAL INFORMATION

No data available. Most components of natural gas are lighter

than air and will therefore be diluted by atmospheric forces in a short period of time.

### 13. DISPOSAL INFORMATION

This product is not a "listed" hazardous waste. But when disposed of in containers may meet the criteria of being an "ignitable" waste. It is the responsibility of the user to determine if the material disposed of meets federal, state, or local criteria to be defined as a hazardous waste.

### 14. TRANSPORT INFORMATION

Identification Number: UN 1971  
Hazard Class: 2.1 (Flammable Gas)

### 15. REGULATORY INFORMATION

#### EPA SARA TITLE III

#### **Section 302 EPCRA Extremely Hazardous Substances (EHS)**

Product Component	CAS No.	Wt%	RQ, lb	TPQ, lb
None				

#### **Section 304 CERCLA Hazardous Substances**

Product Component	CAS No.	Wt%	RQ, lb
Hexane	110-54-3	0-2	5000

#### **Section 311/312 Hazard Categorization**

Acute:	Chronic:	Fire:	Pressure:	Reactive:
		X	X	

#### **Section 313 EPCRA Toxic Substances**

Ingredient	CAS No.	Wt. %
Hexane	110-54-3	0-2

Key: RQ = Reportable Quantity  
TPQ = Threshold Planning Quantity of EHS

### CALIFORNIA PROPOSITION 65 WARNING

Chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm may be found in crude oil and petroleum products. Although it is possible to sufficiently refine a crude oil or its end products to remove the potential for cancer, we are advising that one or more of the listed chemicals may be present in some detectable quantities. Read and follow directions and use care when handling crude oil and petroleum products.

## 16. OTHER INFORMATION

THIS INFORMATION RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED AND MAY NOT BE VALID FOR SUCH MATERIAL USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS. SUCH INFORMATION IS TO THE BEST OF THIS COMPANY'S KNOWLEDGE AND BELIEVED ACCURATE AND RELIABLE AS OF THE DATE INDICATED. HOWEVER, NO REPRESENTATION, WARRANTY OR GUARANTEE IS MADE AS TO THE ACCURACY, RELIABILITY OR COMPLETENESS. IT IS THE USER'S RESPONSIBILITY TO SATISFY THEMSELVES AS TO THE SUITABILITY AND COMPLETENESS OF SUCH INFORMATION FOR HIS OWN PARTICULAR USE.

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