1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

El Paso Corporation
and its subsidiaries
Information: (713) 420-2600
1001 Louisiana Street
CHEMTREC: (800) 424-9300
Houston, Texas 77002

Product Name: Liquefied Natural Gas
MSDS Number: A0103.msd
Last Revision: new
Date Prepared: 12/01/2007

Synonyms: Dry Natural Gas, Compressed Natural Gas (CNG), Liquefied Natural Gas (LNG), Methane, Processed Gas, Sweet Natural Gas, Treated Gas

Product Description: Complex mixture of petroleum hydrocarbons

2. COMPOSITION & INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS No</th>
<th>Wt%</th>
<th>PEL</th>
<th>TLV</th>
<th>Other</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methane</td>
<td>74-82-8</td>
<td>85-97</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td>ppm</td>
</tr>
<tr>
<td>Ethane</td>
<td>74-84-0</td>
<td>2-12</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td>ppm</td>
</tr>
<tr>
<td>Carbon Dioxide</td>
<td>124-38-9</td>
<td>1-5</td>
<td>5000</td>
<td>5000</td>
<td>30000#</td>
<td>ppm</td>
</tr>
</tbody>
</table>

Key: *= 8-Hr. TWA unless otherwise specified
N/A = Not Established by OSHA
# = Short Term Exposure Limit; 15 minutes.

A complex mixture of light gases separated from raw natural gas consisting of aliphatic hydrocarbons having carbon numbers in the range of C1 through C4 predominately methane (C1) and ethane (C2). May be odorized with trace amounts of odorant (typically well below 0.1% t-butyl mercaptan.)

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.

Primary Route of Entry
Eyes: No  Skin: No  Inhalation: Yes  Ingestion: No

Potential Health Effects from Overexposure:

**Acute Effects:**
Eyes: Vapors are not irritating. However, contact with liquid or cold vapor may cause frostbite, freeze burns, and permanent eye damage.
Skin: Vapors are not irritating. Direct contact to the skin or mucous membrane with liquefied product or cold vapor may cause freeze burns and frostbite. Signs of frostbite include a change in the color of the skin to gray or white, possibly followed by blistering. Skin may become inflamed and painful.

Ingestion: Ingestion is unlikely. Contact of the mucous membranes with liquefied product may cause frostbite or freeze burns.

Inhalation: This product is considered to be non-toxic by inhalation. Inhalation of high concentrations may cause central nervous system depression such as dizziness, drowsiness, headache, and similar narcotic symptoms, but no long term effects. Numbness, a “chilly” feeling, and vomiting have been reported from accidental exposure to high concentrations.

This product is a simple asphyxiant. In high concentrations it will displace oxygen from the breathing atmosphere, particularly confined spaces. Signs of asphyxiation will be noticed when oxygen is reduced to below 16% and may occur in several stages. Symptoms may include rapid breathing and pulse rate, headache, dizziness, visual disturbances, mental confusion, incoordination, mood changes, muscular weakness, tremors, cyanosis, narcosis and numbness of the extremities. Unconsciousness leading to central nervous system injury and possibly death will occur with inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

Warning:
The burning of any hydrocarbon as a fuel in an area without ventilation may result in a hazardous level of combustible products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

Chronic Effects:
None expected – see Section 11.

Medical Conditions Aggravated by Exposure:
Individuals with pre-existing conditions of the heart, lungs, and blood may have increased susceptibility to symptoms of asphyxia.

4. FIRST AID MEASURES

Eye Contact: In case of frostbite or freeze burns, gently soak the eyes with cool to lukewarm water. DO NOT WASH THE EYES WITH HOT WATER (i.e. over 105 degrees). Open eyelids wide to allow liquid to evaporate. If the person cannot tolerate light, protect the eyes with a bandage or handkerchief. Do not introduce ointment into the eyes without medical advice. Seek immediate medical treatment.

Skin Contact: Remove contaminated clothing and flush affected area with cool to lukewarm water. Rewarming the exposed area may be performed, however DO NOT USE HOT WATER. Seek immediate attention if blistering, tissue freezing, or frostbite has occurred.
Ingestion: DO NOT INDUCE VOMITING BECAUSE OF DANGER BREATHING LIQUID INTO LUNGS. Seek immediate medical attention. Rinse mouth with water. Administer 1 to 2 glasses of water or milk to drink. Never administer liquids to an unconscious person.

Inhalation: Remove person to fresh air. If the person is not breathing, give artificial respiration. If breathing is difficult, give oxygen. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek immediate medical attention.

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

5. FIRE FIGHTING MEASURES

Flash Point Method: Extremely Flammable Gas
Auto-ignition Point: 900 - 1170°F (482-632°C)
OSHA/NFPA Flammability Class: Flammable Gas
Lower Flammability Limit (%): 3.8 – 6.5
Upper Flammability Limit (%): 13 – 17

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

Fire and Explosion Hazards:
Liquid releases of flammable vapors at well below ambient temperatures readily form a flammable mixture with air. Dangerous fire and explosion hazard when exposed to heat, sparks, or flame. Vapors are heavier than air and may travel long distances to a point of ignition or flashback. Container may explode in heat or fire. Runoff to sewer may cause fire or explosion hazard.

Extinguishing Media:
Dry chemical, carbon dioxide, halon, or water; class C, B, or A extinguisher, respectively. However, fire should not be extinguished unless flow of gas can be immediately stopped.

Fire Fighting Instructions:
Gas Fires should not be extinguished unless flow of gas can be immediately stopped. Shut off source and allow gas to burn out. If spill or leak has not ignited, determine if water spray may assist in dispersing gas or vapor to protect personnel attempting to stop the leak.

Use water to cool equipment, surfaces and containers exposed to fire and excessive heat. For large fires, the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure.

Isolate the area, particularly around the edge of storage vessels. Let vessel, tank car, or container burn unless leak can be stopped. Withdraw immediately in the event of a rising sound from the venting of a safety device. Large fires typically require NIOSH/MSHA-approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.

6. ACCIDENTAL RELEASE
Activate facility Spill Contingency Plan (e.g. SPCC, RCRA, OPA, or Emergency Plan). Evacuate non-essential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible to evaluate the direction of product travel. Vapor cloud may be white, but color will dissipate as cloud disperses – fire and explosion is still present.

Stop the source of the release, if safe to do so. Do not flush down sewer or drainage system. Do not touch spill liquid (Frostbite or freeze burn hazard). Consider the use of water spray to disperse vapors. Isolate the area until gas has dispersed. Ventilate and gas test area before entering.

7. HANDLING & STORAGE

Keep away from flame, sparks, and excessive temperatures. Store only in approved containers. Bond and ground containers. Use only in well ventilated areas. See also applicable OSHA regulations for the handling of this product, including, but not limited to, 29 CFR 1910.110 Storage and Handling of Liquefied Petroleum Gases.

8. EXPOSURE CONTROL, PERSONAL PROTECTION

Engineering Controls: Use adequate ventilation to keep vapor concentration of this product below occupational exposure and flammability limits, particularly in confined spaces. Use explosion proof equipment and lighting in classified/controlled areas.

Eye Protection: Where there is a possibility of liquid contact, wear splash proof SAFETY goggles and faceshield.

Skin Protection: When contact with liquid may occur, wear apron, faceshield, and cold-impervious, insulating gloves.

Inhalation: Use a NIOSH/MSHA approved positive-pressure, supplied air respirator with escape bottle or self-contained breathing apparatus (SCBA) for gas concentrations above occupational exposure limits, for potential uncontrolled release, if exposure levels are not known, or in an oxygen-deficient atmosphere.

Caution: Flammability limits (i.e. explosion hazard) should be considered when assessing the need to expose personnel concentrations requiring respiratory protection selection.

9. PHYSICAL & CHEMICAL PROPERTIES

Appearance: A colorless gas. Cold vapor cloud may be white but the lack of visible gas cloud does not indicate absence of gas. A colorless liquid under pressure.

Odor: Odorless when pure, but may have a “natural gas” type odor when treated with odorizing agent (usually t-butyl mercaptan).

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Range:</td>
<td>-259°F (-162°C)</td>
</tr>
<tr>
<td>Vapor Pressure:</td>
<td>40 atm. @ -187°F (-86°C)</td>
</tr>
<tr>
<td>Vapor Density (air=1):</td>
<td>0.6</td>
</tr>
<tr>
<td>Specific Gravity (H2O=1):</td>
<td>0.4 @ -263°F (-164°C)</td>
</tr>
</tbody>
</table>
Solubility (H2O): 3.5%

10. STABILITY & REACTIVITY

**Stability:**
Stable.

**Conditions to Avoid:**
Keep away from ignition sources and heat, high temperatures, open flames, sparks, welding, smoking, static electricity, and other ignition sources.

**Incompatible Materials:**
Keep away from strong oxidizers.

**Hazardous Decomposition Products:**
Carbon monoxide, carbon dioxide, and non-combustible hydrocarbons (smoke).

**Hazardous Polymerization:**
Will not occur.

11. TOXICOLOGICAL INFORMATION

**Chronic Effects of Carcinogenicity:**
OSHA: No  IARC: No  NTP: No  ACGIH: No

12. ECOLOGICAL INFORMATION

Liquid release is only expected to cause localized, non-persistent environmental damage, such as freezing. Biodegradation of this product may occur in soil and water. Volatilization is expected to exist entirely in the vapor phase in ambient air.

13. DISPOSAL INFORMATION

Consult federal, state, and local waste regulations to determine appropriate waste characterization of material and allowable disposal methods.

14. TRANSPORT INFORMATION

- **Proper Ship Name:** Natural Gas Compressed
- **Hazard Class:** 2.1
- **DOT Identification Number:** UN1971
- **DOT Shipping Label:** Flammable Gas

- **Proper Ship Name:** Natural Gas Refrigerated Liquid (Cryogenic liquid with high methane content)
- **Hazard Class:** 2.1
- **DOT Identification Number:** UN1972
- **DOT Shipping Label:** Flammable Gas

15. REGULATORY INFORMATION

**US Federal Regulatory Information:**
This product and its constituents listed herein are on the EPA TSCA inventory. Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal reporting requirements. Consult those regulations applicable to your facility/operation.

**CERCLA Section 103 and SARA Section 304 (Release to the Environment):**
The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil, refined and unrefined petroleum products and any indigenous components of such. However, other federal reporting requirements (e.g. SARA Section 304 as well as the Clean Water Act if the spill occurs on navigable waters) may still apply.

**SARA Title III – Section 313 Supplier Notifications:**
SARA Title III Hazard Classes:  
- Acute Health Hazard  
- Chronic Health Hazard  
- Fire Hazard

This product does not contain any chemicals subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 and of 40 CFR 372.

This information must be included on all MSDSs that are copied and distributed for this material.

**US State Regulatory Information:**
Any spill or controlled release of this product may be subject to state and/or local reporting requirements. This product and/or its constituents may also be subject to other regulations at the state and/or local level. Consult those regulations applicable to your facility/operations.

**Canadian Regulatory Information (WHIMS)**
WHIMS:  
- Class A (Compressed Gas)  
- Class B, Division 1 (Flammable Gas)

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.

This is the end of MSDS A0103.msd