ME- Propane- 0.00001%-18%
Safety Data Sheet P-18-0305
Date of issue: 05/27/2015

SECTION 1: Product and company identification

1.1. Product identifier
Product form: Mixture
Other means of identification: Mixture of propane and methane.

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture: Industrial use. Use as directed.

1.3. Details of the supplier of the safety data sheet
Praxair, Inc.
39 Old Ridgebury Road
Danbury, CT 06810-5113 - USA
T 1-800-772-9247 (1-800-PRAXAIR) - F 1-716-879-2146
www.praxair.com

1.4. Emergency telephone number
Emergency number: Onsite Emergency: 1-800-645-4633
CHEMTREC, 24hr/day 7days/week — Within USA: 1-800-424-9300, Outside USA: 001-703-527-3887 (collect calls accepted, Contract 17729)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification (GHS-US)
Flam. Gas 1 H220
Compressed gas H280
Aquatic Acute 3 H402

2.2. Label elements
GHS-US labeling
Hazard pictograms (GHS-US):

<table>
<thead>
<tr>
<th>GHS02</th>
<th>GHS04</th>
</tr>
</thead>
</table>

Signal word (GHS-US): DANGER
Hazard statements (GHS-US):
H220 - EXTREMELY FLAMMABLE GAS
H280 - CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED
H402 - HARMFUL TO AQUATIC LIFE
OSHA-H01 - MAY DISPLACE OXYGEN AND CAUSE RAPID SUFFOCATION.
CGA-HG04 - MAY FORM EXPLOSIVE MIXTURES WITH AIR

Precautionary statements (GHS-US):
P210 - Keep away from Heat/Open flames/Sparks/Hot surfaces. - No smoking
P273 - Avoid release to the environment.
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely
P381 - Eliminate all ignition sources if safe to do so
P271+P403 - Use and store only outdoors or in a well-ventilated place.
P501 - Dispose of contents/container in accordance with container supplier/owner instructions.
CGA-PG02 - Protect from sunlight when ambient temperature exceeds 52°C (125°F).

2.3. Other hazards
Other hazards not contributing to the classification: Asphyxiant in high concentrations.

2.4. Unknown acute toxicity (GHS-US)
No data available

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SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methane</td>
<td>(CAS No) 74-82-8</td>
<td>82 - 99.99999</td>
</tr>
<tr>
<td>Propane</td>
<td>(CAS No) 74-98-6</td>
<td>0.00001 - 18</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation: Immediately remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, qualified personnel may give oxygen. Call a physician.

First-aid measures after eye contact: Immediately flush eyes thoroughly with water for at least 15 minutes. Hold the eyelids open and away from the eyeballs to ensure that all surfaces are flushed thoroughly. Contact an opthalmologist immediately.

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

None.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Carbon dioxide, Dry chemical, Water spray or fog. Use extinguishing media appropriate for surrounding fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard: EXTREMELY FLAMMABLE GAS.

Explosion hazard: EXTREMELY FLAMMABLE GAS. Forms explosive mixtures with air and oxidizing agents.

Reactivity: No reactivity hazard other than the effects described in sub-sections below.

5.3. Advice for firefighters

Firefighting instructions: Evacuate all personnel from the danger area. Use self-contained breathing apparatus (SCBA) and protective clothing. Immediately cool containers with water from maximum distance. Stop flow of gas if safe to do so, while continuing cooling water spray. Remove ignition sources if safe to do so. Remove containers from area of fire if safe to do so. On-site fire brigades must comply with OSHA 29 CFR 1910.156 and applicable standards under 29 CFR 1910 Subpart L—Fire Protection.

Protection during firefighting: Compressed gas: asphyxiant. Suffocation hazard by lack of oxygen. DANGER! Flammable, high pressure gas.

Special protective equipment for fire fighters: Standard protective clothing and equipment (Self Contained Breathing Apparatus) for fire fighters.

Other information: Containers are equipped with a pressure relief device. (Exceptions may exist where authorized by DOT.).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: If venting or leaking gas catches fire, do not extinguish flames. Flammable vapors may spread from leak, creating an explosive reignition hazard. Vapors can be ignited by pilot lights, other flames, smoking, sparks, heaters, electrical equipment, static discharge, or other ignition sources at locations distant from product handling point. Explosive atmospheres may linger. Before entering an area, especially a confined area, check the atmosphere with an appropriate device.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

EN (English US) SDS ID: P-18-0305 2/8

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6.2. Environmental precautions

Prevent waste from contaminating the surrounding environment. Prevent soil and water pollution. Dispose of contents/container in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.

6.3. Methods and material for containment and cleaning up

No additional information available

6.4. Reference to other sections

See also sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only non-sparking tools. Use only explosion-proof equipment.

Wear leather safety gloves and safety shoes when handling cylinders. Protect cylinders from physical damage; do not drag, roll, slide or drop. While moving cylinders, always keep in place removable valve cover. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Never insert an object (e.g., wrench, screwdriver, pry bar) into cap openings; doing so may damage the valve and cause a leak. Use an adjustable strap wrench to remove over-tight or rusted caps. Slowly open the valve. If the valve is hard to open, discontinue use and contact your supplier. Close the container valve after each use; keep closed even when empty. Never apply flame or localized heat directly to any part of the container. High temperatures may damage the container and could cause the pressure relief device to fail prematurely, venting the container contents. For other precautions in using this product, see section 16.

7.3. Specific end use(s)

None.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th></th>
<th>USA OSHA OSHA PEL (TWA) (mg/m³)</th>
<th>USA OSHA OSHA PEL (TWA) (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propane (74-98-6)</td>
<td>1800 mg/m³</td>
<td>1000 ppm</td>
</tr>
</tbody>
</table>

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Propane (74-98-6)

ACGIH: Not established

Methane (74-82-8)

ACGIH: Not established
USA OSHA: Not established

8.2. Exposure controls

Appropriate engineering controls: Use an explosion-proof local exhaust system. Local exhaust and general ventilation must be adequate to meet exposure standards. MECHANICAL (GENERAL): Inadequate - Use only in a closed system. Use explosion proof equipment and lighting. Provide adequate general and local exhaust ventilation. Ensure exposure is below occupational exposure limits (where available).

Eye protection: Wear safety glasses when handling cylinders; vapor-proof goggles and a face shield during cylinder changeout or whenever contact with product is possible. Select eye protection in accordance with OSHA 29 CFR 1910.133.

Skin and body protection: Wear metatarsal shoes and work gloves for cylinder handling, and protective clothing where needed. Wear appropriate chemical gloves during cylinder changeout or wherever contact with product is possible. Select per OSHA 29 CFR 1910.132, 1910.136, and 1910.138.

Respiratory protection: When workplace conditions warrant respirator use, follow a respiratory protection program that meets OSHA 29 CFR 1910.134, ANSI Z88.2, or MSHA 30 CFR 72.710 (where applicable). Use an air-supplied or air-purifying cartridge if the action level is exceeded. Ensure that the respirator has the appropriate protection factor for the exposure level. If cartridge type respirators are used, the cartridge must be appropriate for the chemical exposure (e.g., an organic vapor cartridge). For emergencies or instances with unknown exposure levels, use a self-contained breathing apparatus (SCBA).

Thermal hazard protection: Wear cold insulating gloves when transferring or breaking transfer connections.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Gas
Color: Colorless
Odor: No data available
Odor threshold: No data available
pH: Not applicable.
Relative evaporation rate (butyl acetate=1): No data available
Relative evaporation rate (ether=1): Not applicable.
Melting point: No data available
Freezing point: No data available
Boiling point: No data available
Flash point: No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Flammability (solid, gas): No data available
Vapor pressure: Not applicable.
Relative vapor density at 20 °C: No data available
Relative density: No data available
Solubility: Water: No data available
Log Pow: Not applicable.
Log Kow: Not applicable.
Viscosity, kinematic: Not applicable.
Viscosity, dynamic: Not applicable.
Explosive properties: Not applicable.
Oxidizing properties: None.
### Explosion limits

| 9.2. Other information | No data available |

### SECTION 10: Stability and reactivity

<table>
<thead>
<tr>
<th>10.1. Reactivity</th>
<th>No reactivity hazard other than the effects described in sub-sections below.</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.2. Chemical stability</td>
<td>Stable under normal conditions.</td>
</tr>
<tr>
<td>10.3. Possibility of hazardous reactions</td>
<td>No additional information available</td>
</tr>
<tr>
<td>10.4. Conditions to avoid</td>
<td>Keep away from heat/sparks/open flames/hot surfaces. – No smoking.</td>
</tr>
<tr>
<td>10.5. Incompatible materials</td>
<td>No additional information available</td>
</tr>
<tr>
<td>10.6. Hazardous decomposition products</td>
<td>No additional information available</td>
</tr>
</tbody>
</table>

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

- **Acute toxicity**: Not classified
- **Propane (74-98-6)**
  - LC50 inhalation rat (mg/l): 658 mg/l/4h
  - ATE US (vapors): 658.000 mg/l/4h
  - ATE US (dust, mist): 658.000 mg/l/4h
- **Skin corrosion/irritation**: Not classified
  - pH: Not applicable.
- **Serious eye damage/irritation**: Not classified
  - pH: Not applicable.
- **Respiratory or skin sensitization**: Not classified
- **Germ cell mutagenicity**: Not classified
- **Carcinogenicity**: Not classified
- **Reproductive toxicity**: Not classified
- **Specific target organ toxicity (single exposure)**: Not classified
- **Specific target organ toxicity (repeated exposure)**: Not classified
- **Aspiration hazard**: Not classified

### SECTION 12: Ecological information

#### 12.1. Toxicity

No additional information available

#### 12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>ME- Propane- 0.00001%-18%</th>
<th>No ecological damage caused by this product.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propane (74-98-6)</td>
<td>The substance is biodegradable. Unlikely to persist.</td>
</tr>
</tbody>
</table>

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Methane (74-82-8)
Persistence and degradability: The substance is biodegradable. Unlikely to persist.

12.3. Bioaccumulative potential
**ME- Propane- 0.00001%-18%**
Log Pow: Not applicable.
Log Kow: Not applicable.
Bioaccumulative potential: No ecological damage caused by this product.

**Propane (74-98-6)**
Log Pow: 2.36
Log Kow: Not applicable.
Bioaccumulative potential: Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.

**Methane (74-82-8)**
Log Pow: 1.09
Bioaccumulative potential: Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.

12.4. Mobility in soil
**ME- Propane- 0.00001%-18%**
Mobility in soil: No data available.

**Propane (74-98-6)**
Mobility in soil: No data available.
Ecology - soil: Because of its high volatility, the product is unlikely to cause ground or water pollution.

**Methane (74-82-8)**
Ecology - soil: Because of its high volatility, the product is unlikely to cause ground or water pollution.

12.5. Other adverse effects
Effect on ozone layer: None.

SECTION 13: Disposal considerations
13.1. Waste treatment methods
Waste treatment methods: Do not attempt to dispose of residual or unused quantities. Return container to supplier.
Waste disposal recommendations: Do not attempt to dispose of residual or unused quantities. Return container to supplier.

SECTION 14: Transport information
In accordance with DOT
Transport document description: UN1964 Hydrocarbon gas mixture, compressed, n.o.s.
UN-No.(DOT): UN1964
Proper Shipping Name (DOT): Hydrocarbon gas mixture, compressed, n.o.s.
Hazard labels (DOT): 2.1 - Flammable gas

Additional information
Other information: No supplementary information available.
Special transport precautions: Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers:
- Ensure there is adequate ventilation. - Ensure that containers are firmly secured. - Ensure cylinder valve is closed and not leaking. - Ensure valve outlet cap nut or plug (where provided) is correctly fitted. - Ensure valve protection device (where provided) is correctly fitted.
## Transport by sea

<table>
<thead>
<tr>
<th>UN-No. (IMDG)</th>
<th>1964</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name (IMDG)</td>
<td>HYDROCARBON GAS MIXTURE, COMPRESSED, N.O.S.</td>
</tr>
<tr>
<td>Class (IMDG)</td>
<td>2.1 - Flammable gases</td>
</tr>
</tbody>
</table>

## Air transport

<table>
<thead>
<tr>
<th>UN-No. (IATA)</th>
<th>1964</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name (IATA)</td>
<td>HYDROCARBON GAS MIXTURE, COMPRESSED, N.O.S.</td>
</tr>
<tr>
<td>Class (IATA)</td>
<td>2</td>
</tr>
</tbody>
</table>

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

No additional information available

#### 15.2. International regulations

##### CANADA

**Propane (74-98-6)**

Listed on the Canadian DSL (Domestic Substances List)

**Methane (74-82-8)**

Listed on the Canadian DSL (Domestic Substances List)

##### EU-Regulations

#### 15.2. National regulations

No additional information available

#### 15.3. US State regulations

**ME - Propane- 0.00001%-18%()**

| U.S. - California - Proposition 65 - Carcinogens List | No |
| U.S. - California - Proposition 65 - Developmental Toxicity | No |
| U.S. - California - Proposition 65 - Reproductive Toxicity - Female | No |
| U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No |

**Propane (74-98-6)**

| U.S. - California - Proposition 65 - Carcinogens List | No |
| U.S. - California - Proposition 65 - Developmental Toxicity | No |
| U.S. - California - Proposition 65 - Reproductive Toxicity - Female | No |
| U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No |

**Methane (74-82-8)**

| U.S. - California - Proposition 65 - Carcinogens List | No |
| U.S. - California - Proposition 65 - Developmental Toxicity | No |
| U.S. - California - Proposition 65 - Reproductive Toxicity - Female | No |
| U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No |

**Propane (74-98-6)**

| U.S. - Massachusetts - Right To Know List | No |
| U.S. - New Jersey - Right to Know Hazardous Substance List | No |
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Propane (74-98-6)
U.S. - Pennsylvania - RTK (Right to Know) List

Methane (74-82-8)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Other information: When you mix two or more chemicals, you can create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an industrial hygienist or other trained person when you evaluate the end product. Before using any plastics, confirm their compatibility with this product.

Praxair asks users of this product to study this SDS and become aware of the product hazards and safety information. To promote safe use of this product, a user should (1) notify employees, agents, and contractors of the information in this SDS and of any other known product hazards and safety information, (2) furnish this information to each purchaser of the product, and (3) ask each purchaser to notify its employees and customers of the product hazards and safety information.

The opinions expressed herein are those of qualified experts within Praxair, Inc. We believe that the information contained herein is current as of the date of this Safety Data Sheet. Since the use of this information and the conditions of use are not within the control of Praxair, Inc., it is the user's obligation to determine the conditions of safe use of the product.

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SDS US (GHS HazCom 2012) - PDI

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