SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture
Product Name: Propane (non-odorized)
Synonyms: Dimethylmethane, Liquefied Petroleum Gas (LPG), Sales Propane, Commercial Propane, Refinery Propane, Product Propane (non-odorized)

1.2. Intended Use of the Product

Aliphatic hydrocarbons separated from natural gas having carbon numbers in the range of C_2 through C_4, predominantly C_3 (propane and propylene). Propane for commercial distribution will be odorized with trace amounts of odorant (typically well below 0.1% ethyl mercaptan).

1.3. Name, Address, and Telephone of the Responsible Party

Customer
Hess Tower
1501 McKinney
Houston, TX 77010
T:(713) 496-4000

When calling the main operator ask for the EHS Safety Department. All Hess SDSs are also available via the Hess.com website.

1.4. Emergency Telephone Number

Emergency Number: (800) 424-9300 CHEMTREC (24 hours)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS-US/CA Classification
Simple Asphy
Flam. Gas 1 H220
Press. Gas (Liq.) H280

Full text of hazard classes and H-statements : see Section 16.

2.2. Label Elements

GHS-US/CA Labeling
Hazard Pictograms (GHS-US/CA) :

Signal Word (GHS-US/CA) : Danger
Hazard Statements (GHS-US/CA) :
H220 - Extremely flammable gas.
H280 - Contains gas under pressure; may explode if heated.
May displace oxygen and cause rapid suffocation.

Precautionary Statements (GHS-US/CA) :
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 - In case of leakage, eliminate all ignition sources.
P403 - Store in a well-ventilated place.
P410+P403 - Protect from sunlight. Store in a well-ventilated place.

2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions. Contact with gas escaping the container can cause frostbite.
2.4. Unknown Acute Toxicity (GHS-US/CA)
No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>% *</th>
<th>GHS Ingredient Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propane</td>
<td>(CAS-No.) 74-98-6</td>
<td>&gt; 85</td>
<td>Simple Asphy Flam. Gas 1, H220 Press. Gas (Liq.), H280</td>
</tr>
<tr>
<td>Ethane</td>
<td>(CAS-No.) 74-84-0</td>
<td>&lt; 10</td>
<td>Simple Asphy Flam. Gas 1, H220 Press. Gas (Liq.), H280</td>
</tr>
<tr>
<td>Propene</td>
<td>(CAS-No.) 115-07-1</td>
<td>&lt; 10</td>
<td>Simple Asphy Flam. Gas 1, H220 Press. Gas (Liq.), H280 Aquatic Acute 3, H402 Aquatic Chronic 3, H412</td>
</tr>
<tr>
<td>Isobutane</td>
<td>(CAS-No.) 75-28-5</td>
<td>&lt; 1</td>
<td>Simple Asphy Flam. Gas 1, H220 Press. Gas (Liq.), H280</td>
</tr>
<tr>
<td>Ethyl mercaptan</td>
<td>(CAS-No.) 75-08-1</td>
<td>&lt; 0.001</td>
<td>Flam. Liq. 1, H224 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation:vapor), H331 Aquatic Acute 1, H400 Aquatic Chronic 1, H410</td>
</tr>
</tbody>
</table>

*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). If frostbite or freezing occurs, immediately flush with plenty of lukewarm water to GENTLY warm the affected area. Do not use hot water. Do not rub affected area. Get immediate medical attention.

Inhalation: Obtain medical attention if breathing difficulty persists. First, take proper precautions to ensure your own safety before attempting rescue (e.g. wear appropriate respiratory protective equipment, use the buddy system), then remove the exposed person to fresh air. Keep at rest in a position comfortable for breathing.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists. Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical advice/attention.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: May cause frostbite on contact with the liquid. Asphyxia by lack of oxygen: risk of death.
**Inhalation:** This product is considered 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 exposures to high concentrations.

This product is a simple asphyxiant. In high concentrations it will displace oxygen from the breathing atmosphere, particularly in 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 when the atmospheric oxygen concentration is reduced to about ≤8%.

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

**Skin Contact:** Contact with gas/liquid escaping the container can cause frostbite and freeze burns.

**Eye Contact:** Contact with gas/liquid escaping the container can cause frostbite, freeze burns, and permanent eye damage.

**Ingestion:** Not considered a potential route of exposure, but contact with gas/liquid escaping the container can cause freeze burns and frostbite.

**Chronic Symptoms:** None expected under normal conditions of use.

### 4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

### SECTION 5: FIRE-FIGHTING MEASURES

**5.1. Extinguishing Media**

**Suitable Extinguishing Media:** Do not extinguish burning gas if flow cannot be shut off immediately. Extinguish secondary FIRES with appropriate materials.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

**5.2. Special Hazards Arising From the Substance or Mixture**

**Fire Hazard:** Extremely flammable gas.

**Explosion Hazard:** May form flammable/explosive vapor-air mixture. Container may explode in heat of fire.

**Reactivity:** Hazardous reactions will not occur under normal conditions.

**5.3. Advice for Firefighters**

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Gas fires should not be extinguished unless flow of gas can be immediately stopped. Shut off gas 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 leak.

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

Isolate area, particularly around ends 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 a venting safety device. Large fires typically require specially trained personnel and equipment to isolate and extinguish fire.

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH – approved pressure demand self-contained breathing apparatus with full facepiece and full protective clothing.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** Carbon oxides (CO, CO₂).

**Other Information:** Use water spray to disperse vapors.

**Reference to Other Sections**

Refer to Section 9 for flammability properties.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

**6.1. Personal Precautions, Protective Equipment and Emergency Procedures**

**General Measures:** Eliminate every possible source of ignition. Do not get in eyes, on skin, or on clothing.
6.1.1. For Non-Emergency Personnel
   Protective Equipment: Use appropriate personal protective equipment (PPE).

6.1.2. For Emergency Personnel
   Protective Equipment: Equip cleanup crew with proper protection.
   Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Evacuate unnecessary personnel, isolate, and ventilate area. Ventilate area.

6.2. Environmental Precautions
   Prevent entry to sewers and public waters.

6.3. Methods and Materials for Containment and Cleaning Up
   For Containment: Stop leak, if possible without risk. As an immediate precautionary measure, isolate spill or leak area in all directions.
   Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill. Stop the source of the release, if safe to do so. Consider the use of water spray to disperse vapors. Isolate the area until gas has dispersed. Ventilate and gas test area before entering.

6.4. Reference to Other Sections
   See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling
   Additional Hazards When Processed: Handle empty containers with care because residual vapors are flammable. Ruptured cylinders may rocket. Do not pressurize, cut, or weld containers. Asphyxiating gas at high concentrations.
   Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid prolonged contact with eyes, skin and clothing. Do not breathe gas.
   Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities
   Technical Measures: Comply with applicable regulations. Proper grounding procedures to avoid static electricity should be followed.
   Storage Conditions: Store only in approved containers. Bond and ground containers. Keep away from flame, sparks, excessive temperatures and open flame. Keep container closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld, or expose such containers to sources of ignition.

   Store in a well-ventilated area and in accordance with NFPA 58 “Liquefied Petroleum Gas Code”.
   Incompatible Materials: Strong acids, strong bases, strong oxidizers.

7.3. Specific End Use(s)
   Aliphatic hydrocarbons separated from natural gas having carbon numbers in the range of C₂ through C₄, predominantly C₃ (propane and propylene). Propane for commercial distribution will be odorized with trace amounts of odorant (typically well below 0.1% ethyl mercaptan).

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters
   For substances listed in Section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), or Canadian provincial governments.

<table>
<thead>
<tr>
<th></th>
<th>USA OSHA</th>
<th>USA NIOSH</th>
<th>USA IDLH</th>
<th>Alberta</th>
<th>British Columbia</th>
<th>Québec</th>
</tr>
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<tr>
<td></td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>NIOSH REL (TWA) (mg/m³)</td>
<td>US IDLH (ppm)</td>
<td>OEL TWA (ppm)</td>
<td>OEL TWA (ppm)</td>
<td>VEMP (mg/m³)</td>
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<td>1000 ppm</td>
<td>1800 mg/m³</td>
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<td>NIOSH REL (TWA) (ppm)</td>
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<td></td>
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<td>NIOSH REL (TWA) (mg/m³)</td>
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<tr>
<td>British Columbia</td>
<td>OEL TWA (ppm)</td>
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<td></td>
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<td></td>
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<td>VEMP (ppm)</td>
<td></td>
<td></td>
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</table>
Propane (non-odorized)
Safety Data Sheet SDS No: 15056
According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

<table>
<thead>
<tr>
<th>Ethane (74-84-0)</th>
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<th>1000 ppm</th>
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</thead>
<tbody>
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<td>British Columbia</td>
<td>OEL TWA (ppm)</td>
<td>1000 ppm</td>
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</table>

<table>
<thead>
<tr>
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<tbody>
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<td>British Columbia</td>
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</tr>
<tr>
<td>Ontario</td>
<td>OEL TWA (ppm)</td>
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</table>

<table>
<thead>
<tr>
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<th>ACGIH STEL (ppm)</th>
<th>1000 ppm (explosion hazard)</th>
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<td>Ontario</td>
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<table>
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<th>ACGIH TWA (ppm)</th>
<th>0.5 ppm</th>
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<td>25 mg/m³</td>
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<td>USA OSHA</td>
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<tr>
<td>USA NIOSH</td>
<td>NIOSH REL (Ceiling) (mg/m³)</td>
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<td></td>
</tr>
<tr>
<td>USA NIOSH</td>
<td>NIOSH REL (Ceiling) (ppm)</td>
<td>0.5 ppm</td>
<td></td>
</tr>
<tr>
<td>USA IDLH</td>
<td>US IDLH (ppm)</td>
<td>500 ppm</td>
<td></td>
</tr>
<tr>
<td>Alberta</td>
<td>OEL TWA (mg/m³)</td>
<td>1.3 mg/m³</td>
<td></td>
</tr>
<tr>
<td>British Columbia</td>
<td>OEL TWA (ppm)</td>
<td>0.5 ppm</td>
<td></td>
</tr>
<tr>
<td>Ontario</td>
<td>OEL TWA (ppm)</td>
<td>0.5 ppm</td>
<td></td>
</tr>
<tr>
<td>Québec</td>
<td>VEMP (mg/m³)</td>
<td>1.3 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

8.2 Exposure Controls
Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Use explosion-proof equipment. Proper grounding procedures to avoid static electricity should be followed. Gas detectors should be used when flammable gases or vapors may be released. Oxygen detectors should be used when asphyxiating gases may be released.


Materials for Protective Clothing: Chemically resistant materials and fabrics. Wear fire/flame resistant/retardant clothing.
Hand Protection: Wear protective gloves. If material is cold, wear thermally resistant protective gloves.
Eye and Face Protection: Chemical safety goggles.
Skin and Body Protection: Wear suitable protective clothing.
**Propane (non-odorized)**

**Safety Data Sheet**

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**Respiratory Protection:** 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 for 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 to concentrations requiring respiratory protection.


**Thermal Hazard Protection:** Wear thermally resistant protective clothing.

**Other Information:** When using, do not eat, drink or smoke.

---

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

- **Physical State:** Gas
- **Appearance:** 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 ethyl mercaptan).
- **Odor Threshold:** Not available
- **pH:** Not available
- **Evaporation Rate:** Not available
- **Melting Point:** Not available
- **Freezing Point:** Not available
- **Boiling Point:** -42.1 °C (-43.78 °F)
- **Flash Point:** -104 °C (-155.2 °F)
- **Auto-ignition Temperature:** 450 °C (842 °F)
- **Decomposition Temperature:** Not available
- **Flammability (solid, gas):** Extremely flammable gas
- **Lower Flammable Limit:** 2.1 %
- **Upper Flammable Limit:** 9.5 %
- **Vapor Pressure:** 109.73 psig @70°F (21.1°C) for Propane
- **Relative Vapor Density at 20°C:** 1.56 @32°F (0°C) for Propane
- **Relative Density:** Not available
- **Specific Gravity:** 0.531 (H2 = 1) @32°F (0°C) for Propane
- **Solubility:** Slight (62.4 ppm) @ 77°F (25°C) for Propane
- **Partition Coefficient: N-Octanol/Water:** Not available
- **Viscosity:** Not available
- **Explosive Properties:** Contains gas under pressure; may explode if heated

SECTION 10: STABILITY AND REACTIVITY

10.1. **Reactivity:** Hazardous reactions will not occur under normal conditions.

10.2. **Chemical Stability:** Contains gas under pressure; may explode if heated.

10.3. **Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

10.4. **Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, open flames, sources of ignition and incompatible materials.

10.5. **Incompatible Materials:** Strong acids, strong bases, strong oxidizers.

10.6. **Hazardous Decomposition Products:** None expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. **Information on Toxicological Effects - Product**

- **Acute Toxicity (Oral):** Not classified
- **Acute Toxicity (Dermal):** Not classified
Propane (non-odorized)

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10/31/2018
EN (English US)
7/11

- **Acute Toxicity (Inhalation):** Not classified
- **LD50 and LC50 Data:** Not available
- **Skin Corrosion/Irritation:** Not classified
- **Eye Damage/Irritation:** Not classified
- **Respiratory or Skin Sensitization:** Not classified
- **Germ Cell Mutagenicity:** Not classified
- **Carcinogenicity:** Not classified
- **Specific Target Organ Toxicity (Repeated Exposure):** Not classified
- **Reproductive Toxicity:** Not classified
- **Specific Target Organ Toxicity (Single Exposure):** Not classified
- **Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** This product is considered 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 exposures to high concentrations.

This product is a simple asphyxiant. In high concentrations it will displace oxygen from the breathing atmosphere, particularly in 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 when the atmospheric oxygen concentration is reduced to about ≤8%.

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

**Symptoms/Injuries After Skin Contact:** Contact with gas/liquid escaping the container can cause frostbite and freeze burns.

**Symptoms/Injuries After Eye Contact:** Contact with gas/liquid escaping the container can cause frostbite, freeze burns, and permanent eye damage.

**Symptoms/Injuries After Ingestion:** Not considered a potential route of exposure, but contact with gas/liquid escaping the container can cause freeze burns and frostbite.

**Chronic Symptoms:** None expected under normal conditions of use.

**11.2. Information on Toxicological Effects - Ingredient(s)**

**LD50 and LC50 Data:**

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<thead>
<tr>
<th>Ingredient</th>
<th>LD50 Oral Rat</th>
<th>LD50 Dermal Rat</th>
<th>LC50 Oral Rat</th>
<th>LC50 Dermal Rat</th>
<th>LC50 Inhalation Rat</th>
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<tbody>
<tr>
<td>Propane (74-98-6)</td>
<td>682 mg/kg</td>
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<td>7.04 mg/l/4h</td>
<td>4420 ppm/4h</td>
<td>4.42 mg/l/4h</td>
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<tr>
<td>Ethane (74-84-0)</td>
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<td>658 mg/l/4h</td>
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**LD50 and LC50 Data:**

<table>
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<th>Ingredient</th>
<th>LD50 and LC50 Data:</th>
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<tbody>
<tr>
<td>Propane (74-98-6)</td>
<td>LD50 Oral Rat</td>
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<td>&gt; 800000 ppm</td>
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**LC50 Inhalation Rat:**

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<th>Ingredient</th>
<th>LD50 and LC50 Data:</th>
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<tbody>
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<td>LD50 Oral Rat</td>
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<td></td>
<td>&gt; 800000 ppm</td>
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</tbody>
</table>

**Ethane (74-84-0):**

| LC50 Inhalation Rat | 658 mg/l/4h |

**Propene (115-07-1):**

| LC50 Inhalation Rat | > 65000 ppm/4h |

**Isobutane (75-28-5):**

| LC50 Inhalation Rat | 658 mg/l/4h |

**Ethyl mercaptan (75-08-1):**

| LC50 Inhalation Rat | 11000 ppm |

**LD50 Oral Rat:**

| LD50 Oral Rat | 682 mg/kg |

**LD50 Dermal Rat:**

| LD50 Dermal Rat | > 2000 mg/kg |

**LC50 Inhalation Rat:**

| LC50 Inhalation Rat | 7.04 mg/l/4h |

**LC50 Inhalation Rat:**

| LC50 Inhalation Rat | 4420 ppm/4h |

**Propene (115-07-1):**

| IARC Group | 3 |
Propane (non-odorized) Safety Data Sheet SDS No: 15056
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SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity
Ecology - General: Not classified.

Propane (115-07-1)

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<th>Substance</th>
<th>Endpoint</th>
<th>Value</th>
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<td>ErC50 (algae)</td>
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</tr>
<tr>
<td>Ethyl mercaptan (75-08-1)</td>
<td>LC50 Fish 1</td>
<td>2.2 mg/l</td>
</tr>
<tr>
<td></td>
<td>EC50 Daphnia 1</td>
<td>90 - 280 mg/l (Exposure time: 48 h - Species: Daphnia magna)</td>
</tr>
<tr>
<td></td>
<td>EC50 Daphnia 2</td>
<td>0.09 - 0.28 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])</td>
</tr>
<tr>
<td></td>
<td>NOEC Chronic Crustacea</td>
<td>0.009 mg/l</td>
</tr>
</tbody>
</table>

12.2. Persistence and Degradability
Propane (non-odorized)

<table>
<thead>
<tr>
<th>Substance</th>
<th>Endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Persistence and Degradability</td>
<td>Not established.</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative Potential
Propane (non-odorized)

<table>
<thead>
<tr>
<th>Substance</th>
<th>Endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bioaccumulative Potential</td>
<td>Not established.</td>
</tr>
<tr>
<td></td>
<td>Propane (74-98-6)</td>
<td>Log Pow 2.3</td>
</tr>
<tr>
<td></td>
<td>Ethane (74-84-0)</td>
<td>Log Pow &lt;= 2.8</td>
</tr>
<tr>
<td></td>
<td>Propene (115-07-1)</td>
<td>Log Pow &lt;= 2.8</td>
</tr>
<tr>
<td></td>
<td>Isobutane (75-28-5)</td>
<td>BCF Fish 1 1.57 - 1.97</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Log Pow 2.88 (at 20 °C)</td>
</tr>
</tbody>
</table>

12.4. Mobility in Soil
Not available

12.5. Other Adverse Effects
Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, provincial, territorial and international regulations.

Additional Information: Container may remain hazardous when empty. Continue to observe all precautions. Handle empty containers with care because residual vapors are flammable. Empty gas cylinders should be returned to the vendor for recycling or refilling. Do not puncture or incinerate container.

Ecology - Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1. In Accordance with DOT
Proper Shipping Name: PROPANE MIXTURE
Hazard Class: 2.1
Identification Number: UN1978
Label Codes: 2.1
ERG Number: 115

14.2. In Accordance with IMDG
Proper Shipping Name: PROPANE MIXTURE
Propane (non-odorized)
Safety Data Sheet SDS No: 15056
According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

10/31/2018

Hazard Class : 2.1

Identification Number : UN1978
Label Codes : 2.1
EmS-No. (Fire) : F-D
EmS-No. (Spillage) : S-U

14.3. In Accordance with IATA
Proper Shipping Name : PROPANE MIXTURE
Identification Number : 2.1
Hazard Class : UN1978
Label Codes : 2.1
ERG Code (IATA) : 10L

14.4. In Accordance with TDG
Proper Shipping Name : PROPANE MIXTURE
Hazard Class : 2.1
Identification Number : UN1978
Label Codes : 2.1

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

Propane (non-odorized)

SARA Section 311/312 Hazard Classes
- Fire hazard
- Sudden release of pressure hazard
- Immediate (acute) health hazard

Propane (74-98-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Ethane (74-84-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Propene (115-07-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313
SARA Section 313 - Emission Reporting : 1 %

Isobutane (75-28-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Ethyl mercaptan (75-08-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. US State Regulations

Propane (74-98-6)
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

Ethane (74-84-0)
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

Propene (115-07-1)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List
# Propane (non-odorized)

**Safety Data Sheet**

**SDS No:** 15056

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

## Isobutane (75-28-5)

- 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

## Ethyl mercaptan (75-08-1)

- 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

### 15.3. Canadian Regulations

<table>
<thead>
<tr>
<th>Propane (74-98-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed on the Canadian DSL (Domestic Substances List)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ethane (74-84-0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed on the Canadian DSL (Domestic Substances List)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Propene (115-07-1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed on the Canadian DSL (Domestic Substances List)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Isobutane (75-28-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed on the Canadian DSL (Domestic Substances List)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ethyl mercaptan (75-08-1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed on the Canadian DSL (Domestic Substances List)</td>
</tr>
</tbody>
</table>

### SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Date of Preparation or Latest Revision:** 10/31/2018

**Other Information:**

This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada’s Hazardous Products Regulations (HPR) SOR/2015-17.

### GHS Full Text Phrases:

<table>
<thead>
<tr>
<th>Phrase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H280</td>
<td>Contains gas under pressure; may explode if heated</td>
</tr>
<tr>
<td>Acute Tox. 3 (Inhalation:vapor)</td>
<td>Acute toxicity (inhalation:vapor) Category 3</td>
</tr>
<tr>
<td>Acute Tox. 4 (Oral)</td>
<td>Acute toxicity (oral) Category 4</td>
</tr>
<tr>
<td>Aquatic Acute 1</td>
<td>Hazardous to the aquatic environment - Acute Hazard Category 1</td>
</tr>
<tr>
<td>Aquatic Acute 3</td>
<td>Hazardous to the aquatic environment - Acute Hazard Category 3</td>
</tr>
<tr>
<td>Aquatic Chronic 1</td>
<td>Hazardous to the aquatic environment - Chronic Hazard Category 1</td>
</tr>
<tr>
<td>Aquatic Chronic 3</td>
<td>Hazardous to the aquatic environment - Chronic Hazard Category 3</td>
</tr>
<tr>
<td>Flam. Gas 1</td>
<td>Flammable gases Category 1</td>
</tr>
<tr>
<td>Flam. Liq. 1</td>
<td>Flammable liquids Category 1</td>
</tr>
<tr>
<td>Press. Gas (Liq.)</td>
<td>Gases under pressure Liquefied gas</td>
</tr>
<tr>
<td>Simple Asphy</td>
<td>Simple Asphyxiant</td>
</tr>
<tr>
<td>H220</td>
<td>Extremely flammable gas</td>
</tr>
<tr>
<td>H224</td>
<td>Extremely flammable liquid and vapor</td>
</tr>
<tr>
<td>H280</td>
<td>Contains gas under pressure; may explode if heated</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H331</td>
<td>Toxic if inhaled</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life</td>
</tr>
<tr>
<td>H402</td>
<td>Harmful to aquatic life</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects</td>
</tr>
<tr>
<td>H412</td>
<td>Harmful to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>
Propane (non-odorized)
Safety Data Sheet SDS No: 15056
According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFPA Health Hazard</td>
<td>1</td>
<td>Materials that, under emergency conditions, can cause significant irritation.</td>
</tr>
<tr>
<td>NFPA Fire Hazard</td>
<td>4</td>
<td>Materials that rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air and burn readily.</td>
</tr>
<tr>
<td>NFPA Reactivity Hazard</td>
<td>0</td>
<td>Material that in themselves are normally stable, even under fire conditions.</td>
</tr>
<tr>
<td>NFPA Specific Hazards</td>
<td>SA</td>
<td>This denotes gases which are simple asphyxiants.</td>
</tr>
</tbody>
</table>

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

NA GHS SDS 2015 (Can, US)