

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Code:** 00002  
**Product Name:** Propylene  
**Other names:** Propene, Methylethylene, 1-Propylene, R1270

**Company Name:** Gas Innovations  
18005 E. Hwy 225  
La Porte, TX 77571  
**Phone Number:** +1 (281)471-2200

**Web site address:** www.gasinnovations.com

**Emergency Contact:** 3E (within United States) Infotrac (outside of +1 (866)303-2640  
**Information:** United States) +1 (352)323-3500

**2. HAZARDS IDENTIFICATION**

Flammable Gases, Category 1

Gas Under Pressure, Compressed gas



**GHS Signal Word:** Danger

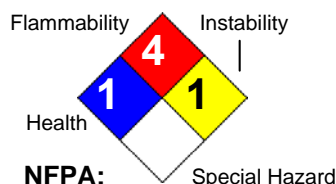
**GHS Hazard Phrases:** H220 - Extremely flammable gas.  
H280 - Containers gas under pressure; may explode if heated.

**GHS Precaution Phrases:** P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

**GHS Response Phrases:** P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.  
P381 - Eliminate all ignition sources if safe to do so.

**GHS Storage and Disposal Phrases:** P410+403 - Protect from sunlight and store in well-ventilated place.

**Hazard Rating System:**



**Potential Health Effects (Acute and Chronic):**

Propylene is nontoxic but can act as a simple asphyxiant by displacing air. Symptoms of asphyxia include rapid respirations, dizziness and fatigue. Contact with the liquid phase or with the cold gas escaping from cylinder may cause frostbite.

**Inhalation:**

May be harmful if inhaled. May cause respiratory irritation. This material can act as a simple asphyxiant by displacement of air.

**Skin Contact:**

May cause skin irritation. May cause frostbite.

**Eye Contact:**

May cause eye irritation.

**Ingestion:**

May be harmful if swallowed.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

| CAS #    | Hazardous Components (Chemical Name) | Concentration |
|----------|--------------------------------------|---------------|
| 115-07-1 | Propylene                            | 100 %         |

Other means of identification: Dimethyl methane, liquefied petroleum gas n-propane, Propyl hydride, LPG

#### 4. FIRST AID MEASURES

|   |   |
|---|---|
| <b>Emergency and First Aid Procedures: Protection of first aid personnel:</b> | Consult a physician. Show this safety data sheet to the doctor in attendance. No action should be taken without proper training.  |
| <b>In Case of Inhalation:</b>   | If breathed in, move person into fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician. Wash off with soap and plenty of water. If skin irritation occurs, get medical advice/attention. Warm up frozen tissue and seek medical help. To avoid the possibility of static electricity, soak product saturated clothing with water prior to removal. |
| <b>In Case of Skin Contact , Frostbite:</b>                                   | Immediately flush eyes with plenty of water for at least 15 minutes. Hold eyelids apart and flush eyes with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and tested by medical personnel.   |

#### 5. FIRE FIGHTING MEASURES

|  |  |
|--|--|
| <b>Ingestion:</b>                        | NA Method Used: Not Applicable   |
| <b>Explosive Limits:</b>                 | LEL: 2.0% (V) UEL: 11.1% (V)   |
| <b>Autoignition Pt:</b>                  | 480 C (896 F)  |
| <b>Suitable Extinguishing Media:</b>     | Stop the flow of gas. If the flow cannot be stopped, let the fire burn out while cooling the cylinder and the surrounding areas using a water spray.   |
| <b>Fire Fighting Instructions:</b>       | Personnel may have to wear approach-type protective suits and positive pressure self-contained breathing apparatus. Firefighters' turnout gear may be inadequate. Cylinders exposed to fire may rupture with violent force. Extinguishing surrounding fire and keep cylinders cool by applying water from a maximum possible distance with a water spray. Flammable gases may spread from a spill after the fire is extinguished and be subject to re-ignition. If heated, container could explode due to rising pressure. |
| <b>Flammable Properties and Hazards:</b> | High temperatures and fire conditions can result in the formation of carbon monoxide and carbon dioxide.   |

#### 6. ACCIDENTAL RELEASE MEASURES

|   |   |
|---|---|
| <b>Protective Precautions, Protective Equipment and Emergency Procedures:</b> | Use proper personal protective equipment as indicated in Section 8. Keep unnecessary people from entering. No action should be taken by personnel without suitable training.  |
| <b>Environmental Precautions:</b>   | Prevent further leakage or spillage if safe to do so. Do not let product enter drains.  |
| <b>Steps To Be Taken In Case Material Is Released Or Spilled:</b>             | Forms explosive mixtures with air. Immediately evacuate all personnel from danger area. Use self-contained breathing apparatus where needed. Remove all sources of ignition if safe to do so. Reduce vapors with fog or fine water spray, taking care not to spread liquid with water. Shut off flow if safe to do so. Ventilate area or move container to a well-ventilated area. Flammable vapors may spread from leak and could explode if reignited by sparks or flames. Explosive atmospheres may linger. Before entering area, especially confined areas, check atmosphere with an appropriate device.<br>For controlling larger flows, personnel may have to wear approach-type protective suits and self-contained breathing apparatus. |

#### 7. HANDLING AND STORAGE

|   |   |
|---|---|
| <b>Precautions To Be Taken in Handling:</b> | Avoid inhalation of vapor or mist. Keep away from heat, sparks and flame. Keep away from sources of ignition - No smoking. Use spark-proof tools and explosion proof equipment. Use in a closed system. Secure the cylinder to prevent it from falling or being knocked over. Install check valves or traps to prevent suckback to the cylinder. Ground all lines and equipment. Leak check the lines and equipment. Have an emergency plan |
|---|---|

covering steps to be taken in the event of an accidental release.

Wear leather safety gloves and safety shoes when handling cylinders. Protect cylinders from physical damage; do not drag, roll, slide or drop. While moving cylinder, 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.

**Precautions To Be Taken in Storing:**

Cylinders should be stored and used in dry, well-ventilated areas away from sources of heat or ignition. Store away from oxidizers.

**Other Precautions:**

**NOTE:**

See General Hygiene as well.

When handling product under pressure, use piping and equipment adequately designed to withstand the pressures to be encountered. Never work on a pressurized system. Use a back flow preventive device in the piping. Gases can cause rapid suffocation because of oxygen deficiency; store and use with adequate ventilation. If a leak occurs, close the container valve and blow down the system in a safe and environmentally correct manner in compliance with all international, federal/national, state/provincial, and local laws; then repair the leak. Never place a container where it may become part of an electrical circuit.

**General hygiene:**

Eating, drinking and smoking in areas where this product is used or stored should be strictly prohibited.

Wash face and hands and removed contaminated clothing before entering places that eating, drinking, and smoking occur.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| CAS #   | Partial Chemical Name  | OSHA TWA | ACGIH TWA                  | Other Limits |
|---|--|----------|----------------------------|--------------|
| 115-07-1  | Propylene  | No data. | TLV: Simple asphyxiant ppm | No data.     |
| <b>Respiratory Equipment (Specify Type):</b>    | If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.   |          |                            |              |
| <b>Eye Protection:</b>                          | Wear safety glasses when handling cylinders; vapor-proof goggles and a face shield during cylinder change out or whenever contact with product is possible. Select eye protection in accordance with OSHA 29 CFR 1910.133. |          |                            |              |
| <b>Protective Gloves:</b>                       | Wear appropriate gloves to prevent skin exposure.  |          |                            |              |
| <b>Other Protective Clothing:</b>               | Fire resistant clothing, or FRC, should be used by all personnel exposed to the product.   |          |                            |              |
| <b>Engineering Controls (Ventilation etc.):</b> | Use explosion-proof ventilation equipment.   |          |                            |              |
| <b>Work/Hygienic/Maintenance Practices:</b>     | Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.   |          |                            |              |
| <b>Exposure control:</b>                        | Use only with proper ventilation. Use ventilation equipment that ensures operator exposure below recommended levels.   |          |                            |              |
| <b>General hygiene:</b>                         | Eating, drinking and smoking in areas where this product is used or stored should be strictly prohibited.  |          |                            |              |
|   | Wash face and hands and removed contaminated clothing before entering place.   |          |                            |              |

**9. PHYSICAL AND CHEMICAL PROPERTIES**

|   |  |
|---|--|
| <b>Physical States:</b>                   | [ X ] Gas    [ ] Liquid    [ ] Solid                             |
| <b>Appearance and Odor:</b>               | Appearance: colorless.<br>Odor: Characteristic natural gas odor. |
|   | Specific volume: 0.567 m3/kg, 9.06 ft3/lb @ 1 atm, 21.1C.        |
|   | Solubility in Water: 22.05 cm3/100 ml @ 1 atm, 20C.              |
| <b>Freezing Point:</b>                    | -185 C (-301 F)  |
| <b>Boiling Point:</b>                     | -47.7 C (-53.9 F)  |
| <b>Decomposition Temperature:</b>         | NA   |
| <b>Autoignition Pt:</b>                   | 480 C (896 F)  |
| <b>Flash Pt:</b>                          | NA    Method Used: Not Applicable                                |
| <b>Explosive Limits:</b>                  | LEL: 2.1% (V)                      UEL: 10.1% (V)                |
| <b>Specific Gravity (Water = 1):</b>      | NA   |
| <b>Density:</b>                           | 1.48 @ 1 atm at 20.0 C (68.0 F)                                  |
| <b>Bulk density:</b>                      | NA   |
| <b>Vapor Pressure (vs. Air or mm Hg):</b> | 136.5 PSI    at 21.1 C (70.0 F)                                  |
| <b>Vapor Density (vs. Air = 1):</b>       | NA   |
| <b>Evaporation Rate:</b>                  | NA   |
| <b>Solubility in Water:</b>               | NA   |
| <b>Saturated Vapor Concentration:</b>     | NA   |
| <b>Viscosity:</b>                         | NA   |
| <b>pH:</b>                                | NA   |
| <b>Percent Volatile:</b>                  | NA   |
| <b>VOC / Volume:</b>                      | NA   |
| <b>Particle Size:</b>                     | NA   |
| <b>Heat Value:</b>                        | NA   |
| <b>Corrosion Rate:</b>                    | NA   |
| <b>Molecular Formula &amp; Weight:</b>    | C3H6                      42.081                                 |

**10. STABILITY AND REACTIVITY**

|   |  |
|---|--|
| <b>Reactivity:</b>                                | High temperatures and fire conditions can result in the formation of carbon monoxide and carbon dioxide. |
| <b>Stability:</b>                                 | Unstable [ ]    Stable [ X ]   |
| <b>Conditions To Avoid - Instability:</b>         | Heat, flames and sparks. No smoking. Do not weld, braze, solder, grind, or cut with product present.     |
| <b>Incompatibility - Materials To Avoid:</b>      | Oxidizing materials.   |
| <b>Hazardous Decomposition Or Byproducts:</b>     | High temperatures and fire conditions can result in the formation of carbon monoxide and carbon dioxide. |
| <b>Possibility of Hazardous Reactions:</b>        | Will occur [ ]    Will not occur [ X ]   |
| <b>Conditions To Avoid - Hazardous Reactions:</b> | No data available.   |

**11. TOXICOLOGICAL INFORMATION**

**Toxicological Information:** Epidemiology: No information available.  
 Teratogenicity: No information available.  
 Reproductive Effects: No information available.  
 Mutagenicity: No information available.  
 Neurotoxicity: No information available.

Other Studies: CAS# 115-07-01:

Acute toxicity, LC, Inhalation, Species: Rat, 86 g/m3, 4H.

**Carcinogenicity:** NTP? No IARC Monographs? No OSHA Regulated? No

**12. ECOLOGICAL INFORMATION**

**General Ecological Information:** Environmental: No information available.  
 Physical: No information available.

**Results of PBT and vPvB assessment:** No data available.

**Persistence and Degradability:** No data available.

**Bioaccumulative Potential:** Product/Ingredient name: Propylene Log Pow 1.77 BCF Potential Low

**Mobility in Soil:**

**13. DISPOSAL CONSIDERATIONS**

**Waste Disposal Method:** Do not attempt to dispose of residual or unused quantities. Return container to supplier.  
 Dispose of contents/containers in accordance with local/regional/national/international regulations.

**14. TRANSPORT INFORMATION**

**TRANSPORTATION DOCUMENT DESCRIPTION:** UN1077 Propylene (see also Petroleum gases, liquefied (UN1075). 2.1

**DOT Proper Shipping Name:** Propylene. see also Petroleum gases, liquefied (UN1075).

**DOT Hazard Class:** 2.1 FLAMMABLE GAS

**UN/NA Number:** UN1077

**DOT Special Provisions (49 CFR172.102)**

For domestic transportation only, the identification number UN1075 may be used in place of the identification number specified in column (4) of the 172.101 table. The identification number used must be consistent on package markings, shipping papers and emergency response information.

**15. REGULATORY INFORMATION**

**EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists**

| CAS #    | Hazardous Components (Chemical Name) | S. 302 (EHS) | S. 304 RQ | S. 313 (TRI) |
|----------|--------------------------------------|--------------|-----------|--------------|
| 115-07-1 | Propylene                            | No           | No        | Yes          |

| CAS #    | Hazardous Components (Chemical Name) |
|----------|--------------------------------------|
| 115-07-1 | Propylene                            |

**Other US EPA or State Lists**

TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: TAC, Title 8; MA Oil/HazMat: Yes; MI CMR, Part 5: No; NC TAP: No; NJ EHS: Yes - 1609; NY Part 597: No; PA HSL: Yes - E; SC TAP: No; WI Air: No

| CAS #    | Hazardous Components (Chemical Name) |
|----------|--------------------------------------|
| 115-07-1 | Propylene                            |

**International Regulatory Lists**

Canadian DSL: Yes; Canadian NDSL: No; Mexico INSQ: Yes - 1075; Australia ICS: Yes; New Zealand IOC: Yes; China IECSC: Yes; Japan ENCS: Yes - (2)-13; Korea ECL: Yes -

**16. OTHER INFORMATION****Revision Date:** 03/22/2015**Additional Information About** No data available.**This Product:****Company Policy or****Disclaimer:**

The information, recommendations, and suggestions herein were compiled from reference material and other sources believed to be reliable. However, the SDS's accuracy or completeness is not guaranteed by Gas Innovations or its affiliates, nor is any responsibility assumed or implied for any loss or damage resulting from inaccuracies or omissions. Since conditions of use are beyond our control, no warranties of merchantability of fitness for a particular purpose are expressed or implied. This SDS is not intended as a license to operate under, or a recommendation to infringe on, any patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.