

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Code:** 00002  
**Product Name:** Propylene  
**Other Names:** Propene, Methyl ethylene, 1-Propylene, R1270  
**Company Name:** Gas Innovations  
 18005 E. Hwy 225  
 La Porte, TX 77571  
  
**Web site address:** www.gasinnovations.com **Phone Number:** +1 (281)471-2200  
**Emergency Contact:** 3E (within United States) +1 (866)303-2640  
**Information:** Infotrac (outside of United States) +1 (352)323-3500

**2. HAZARDS IDENTIFICATION**

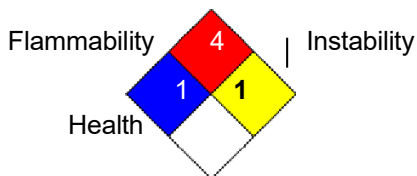
**Flammable Gases:** Category 1  
**Gas Under Pressure:** Liquefied gas

**Symbol:**



**GHS Signal Word:** Danger  
**GHS Hazard Phrases:** H220 - Extremely flammable gas.  
 H280 - Contains gas under pressure; may explode if heated.  
 OSHA-H01 - May displace oxygen and cause rapid suffocation  
 CGA-HG01 - May cause frostbite  
 CGA-HG04 - May form explosive mixtures with air  
**GHS Precaution Phrases:** P202 - Do not handle until all safety precautions have been read and understood  
 P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
 P271 - Use only outdoors or in a well-ventilated area.  
 P280 - Wear eye protection, face protection, protective gloves, protective clothing.  
**GHS Response Phrases:** P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.  
 PP305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes.  
 Remove contact lenses, if present and easy to do. Continue rinsing  
 P308+P313 - If exposed or concerned: Get medical advice/attention.  
 381 - Eliminate all ignition sources if safe to do so.  
 P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing  
**GHS Storage and Disposal Phrases:** P410+403 - Protect from sunlight when ambient temperature exceeds 52°C/125 °F and store in well-ventilated place.  
 CGA-PG05 - Use a back flow preventive device in the piping  
 CGA-PG06 - Close valve after each use and when empty  
 CGA-PG10 - Use only with equipment rated for cylinder pressure  
 CGA-PG14 - Approach suspected leak area with caution  
 CGA-PG21 - Open valve slowly

## Hazard Rating System:



**NFPA:** Special Hazard

**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 %

### 4. FIRST AID MEASURES

**Emergency and First Aid Procedures:** Consult a physician. Show this safety data sheet to the doctor in attendance. No action should be taken without proper training.

**In Case of Inhalation:** If breathed in, move a person into fresh air. If not breathing gives artificial respiration, preferably mouth-to-mouth. If breathing is difficult, oxygen should be administered by qualified personnel. Remove victims from uncontaminated areas wearing self-contained breathing apparatus. Keep the victim warm and rested. Call a physician.

**In Case of Skin Contact:** Wash off with soap and plenty of water. If frostbite or freezing occurs, immediately flush with plenty of lukewarm water (105-115°F; 41-46°C). DO NOT USE HOT WATER. If warm water is not available, gently wrap affected parts in blankets. 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.

**In Case of Eye Contact:** 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

**Flash Pt:** Not applicable for gas

**Method Used:** Not Applicable

**Explosive Limits:** Lower level:1.8%(Volume in air) Upper level EL:11.2% (Volume in air)

**Autoignition Pt:** 485 °C (851°F)

**Suitable Extinguishing Media:** 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. Carbon dioxide, a regular dry chemical. For Large fires: Flood with fine water spray.

**Fire Fighting Instructions:** Keep unnecessary people away, isolate hazard areas and deny entry. Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. For fires in cargo or storage area: Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of

tanks due to fire. 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.

**Flammable Properties and Hazards:**

High temperatures and fire conditions can result in the formation of carbon monoxide and carbon dioxide. Vapor/air mixtures are explosive above flash point. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back.

## 6. ACCIDENTAL RELEASE MEASURES

**Protective Precautions, Protective Equipment and Emergency Procedures:**

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.** Do not touch spilled material. Remove sources of ignition.

**Environmental Precautions:**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Steps To Be Taken in Case Material Is Released or Spilled:**

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. For controlling larger flows, personnel may have to wear approach-type protective suits and self-contained breathing apparatus.

## 7. HANDLING AND STORAGE

**Precautions To Be Taken in Handling:**

Avoid inhalation of vapor or mist. Keep away from heat, sparks and flames. 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 sucking back 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 the cylinder, always keep in place removable valve cover. Never attempt to lift a cylinder with 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. All equipment used when handling the product must be grounded.

**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. Keep separated from incompatible substances.

**Other Precautions:**

When handling a 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; stored and used 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. Do not remove or deface labels provided by the supplier for the identification of the container contents.

**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.	500 ppm	Mexico: 500 ppm TWA
<b>Respiratory Equipment (Specify Type):</b>	If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Self-contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen-deficient atmospheres.			
<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. Provide an emergency eye wash fountain and quick drench shower in the immediate work area			
<b>Protective Gloves:</b>	Wear appropriate gloves to prevent skin exposure. For the liquid: Wear chemical resistant, insulated gloves.			
<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

Physical States:	[ X ] Gas    [ ] Liquid    [ ] Solid	
Appearance:	Colorless	
Odor:	Characteristic natural gas odor. Stenchant often added	
Specific volume:	0.567 m <sup>3</sup> /kg, 9.06 ft <sup>3</sup> /lb. @ 1 am, 21.1C.	
Solubility in Water:	384 mg/l	
Freezing Point:	-185 C (-301 F)	
Boiling Point:	-48 °C	
Decomposition Temperature:	NA	
Autoignition Pt:	485 °C (851°F)	
Flash Pt:	Not applicable for gases	
Method used:	Not Applicable	
Explosive Limits:	Lower level: 1.8% (Volume in air)	Upper level: 11.2% (Volume in air)
Specific Gravity (Water = 1):	0.5139 g/cm <sup>3</sup> (at 20 °C)	
Density:	1.7855 g/L	
Bulk density:	NA	
Vapor Pressure (vs. Air or mm Hg):	7828 mmHg at 21.1 °C	
Vapor Density(air=1)	1.5	
Evaporation Rate:	NA	
Solubility in Water:	200 mg/l	
Saturated Vapor Concentration:	NA	
Viscosity:	0.14 cp	
pH:	NA	
Percent Volatile:	NA	
VOC / Volume:	NA	
Particle Size:	NA	
Heat Value:	NA	
Corrosion Rate:	NA	
Molecular Formula:	C <sub>3</sub> H <sub>6</sub>	
Molar mass:	42.09 g/mol	

## 10. STABILITY AND REACTIVITY

Reactivity:	High temperatures and fire conditions can result in the formation of carbon monoxide and carbon dioxide.
Stability:	Unstable [ ] Stable [ X ]
Conditions To Avoid - Instability:	Heat, flames and sparks. No smoking. Do not weld, braze, solder, grind, or cut with product present. Protect from physical damage
Incompatibility Materials to Avoid:	Oxidizing agents. Halo carbons, halogens, acids.
Hazardous Decomposition or Byproducts:	High temperatures and fire conditions can result in the formation of carbon monoxide and carbon dioxide.
Possibility of Hazardous Reactions:	Will occur [ ] Will not occur [ X ]
Conditions To Avoid - Hazardous Reactions:	No data available.

## 11. TOXICOLOGICAL INFORMATION

Epidemiology:	No information available.
Teratogenicity:	No information available.
Reproductive toxicity:	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/m<sup>3</sup>, 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:** The substance is readily biodegradable. Unlikely to persist

**Bio accumulative 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. Waste gas should be flared through a suitable burner with flash back arrestor. Do not discharge into areas where there is a risk of forming an explosive mixture with air

## 14. TRANSPORT INFORMATION

### TRANSPORTATION DOCUMENT DESCRIPTION: UN1077 Propylene

#### LAND TRANSPORT (US DOT):

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

**DOT Hazard Class:** 2.1 FLAMMABLE GAS

**UN/NA number:** UN1077

DOT Packaging Non Bulk (49 CFR 173.xxx) 304

DOT Packaging Bulk (49 CFR 173.xxx) 314;315

#### Labels:



#### Transport by sea

Transport document description (IMDG) UN 1077 PROPYLENE, 2.1

UN-No. (IMDG) 1077

Proper Shipping Name (IMDG) PROPYLENE

Class (IMDG) 2.1 - Flammable gases

MFAG-No 115

#### Transport by Air

Transport document description (IATA) UN 1077 Propylene, 2.1

UN-No. (IATA) 1077

Proper Shipping Name (IATA) Propylene

Class (IATA) 2.1 - Gases: Flammable

## 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	No

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; MN: Yes;

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 - KE-29388; Philippines ICCS: Yes; REACH: Yes - (R), (P); TH – TECl: Yes; TW, CN : Yes ; VN(Draft) : Yes ;

## 16. OTHER INFORMATION

**Revision Date:** 07/30/2024

**Additional Information About This Product:** No data available.

**NFPA Ratings:**

- 0= Minimal Hazard
- 1= Slight Hazard
- 2= Moderate Hazard
- 3= Serious Hazard
- 4= Severe Hazard

**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.