



Material Safety Data Sheet

1. Product and Company Identification

Product name : **Propylene**

Chemical formula : C-H3-C-H-C-H2

Synonyms : Propene; Methylethene; Methylethylene; 1-Propylene; 1-Propene; UN 1077

Company : Med-Tech Gases, Inc.
20 Hall Street
Medford, MA 02155

Telephone : 800-FINE-GAS

Emergency : 800-424-9300

2. Composition/Information on Ingredients

Components	CAS Number	% Volume
Propylene	115-07-1	100%

3. Hazards Identification

Emergency Overview

May cause central nervous system depression, difficulty breathing.
Flammable gas. May cause flash fire.

Potential Health Effects

Inhalation : Tearing, nausea, vomiting, symptoms of drunkenness, suffocation, convulsion, coma.

Eye contact : Frostbite, blurred vision.

Skin contact : Blisters, frostbite.

Ingestion : Frostbite.

Chronic Health Hazard : None known.

4. First Aid Measures

General advice : None.

Eye contact : Contact with liquid: Immediately flush eyes with plenty of water for at least 15 minutes. Then get medical attention immediately.

Skin contact : If frostbite or freezing occur, 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. Get immediate medical attention.

Ingestion : If a large amount is swallowed, get medical attention.

Inhalation : If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

Note to physicians : For inhalation, consider oxygen.

5. Fire-Fighting Measures

- Suitable extinguishing media : Carbon dioxide, regular dry chemical.
Large fires: Flood with fine water spray.
- Specific hazards : Severe fire hazard. 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. Electrostatic discharges may be generated by flow or agitation resulting in ignition or explosion.
- Fire fighting : Move container from fire area if it can be done without risk. Cool containers with water spray until well after fire is out. Stay away from 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. If this is impossible, then take the following precautions: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck: Stop leak if possible without personal risk. Let fire burn unless leak can be stopped immediately. For smaller tanks or cylinders, extinguish and isolate from other flammables. Evacuation radius: 800 meters (1/2 mile). Stop flow of gas.

6. Accidental Release Measures

- Occupational spill/release : Avoid heat, flames, sparks and other sources of ignition. Do not touch spilled material. Stop leak if possible without personal risk. Reduce vapors with water spray. Keep unnecessary people away, isolate hazard area and deny entry. Remove sources of ignition. Ventilate closed spaces before entering.
- Additional advice : None.

7. Handling and Storage

Handling

Secure cylinder when using to protect from falling. Use suitable hand truck to move cylinders.

Storage

Store in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.110. Protect from physical damage. Store in a cool, dry place. Store in a well-ventilated area. Avoid heat, flames, sparks and other sources of ignition. Store outside or in a detached building. Keep separated from incompatible materials. Grounding and bonding required.

8. Exposure Controls / Personal Protection

Exposure limits

ACGIH : 500 ppm TWA

Engineering measures/Ventilation

Provide local exhaust system. Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Ensure compliance with applicable exposure limits.

Personal protective equipment

Respiratory protection : Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.
For unknown concentrations or immediately dangerous to life or health – Any supplied-air respirator with a full facepiece that is operated in a pressure-

demand or other positive pressure mode in combination with an auxiliary self-contained breathing apparatus operated in a pressure-demand or other positive-pressure mode.

Any self-contained breathing apparatus with a full facepiece that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

Hand protection	:	Wear insulated gloves.
Eye protection	:	For the gas: Eye protection is not required, but recommended. For the liquid: Wear splash resistant safety goggles. Contact lenses should not be worn. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
Skin and body protection	:	For the gas: Protective clothing is not required. For the liquid: Wear appropriate, protective, cold insulating clothing.

9. Physical and Chemical Properties

Form	:	Gas.
Color	:	Colorless.
Odor	:	Not available.
Molecular weight	:	42.08
Vapor pressure	:	7828 mmHg @ 21.1°C
Vapor density	:	1.5 (air = 1)
Specific gravity	:	Not applicable.
Boiling point	:	-53°F (-47°C)
Melting point	:	-301°F (-185°C)
Water solubility	:	45%
Evaporation rate	:	Not applicable.
Solvent solubility	:	Soluble: alcohol, ether, acetic acid

10. Stability and Reactivity

Stability	:	May polymerize. May react on contact with air, heat, light or water.
Conditions to avoid	:	Avoid heat, flames, sparks and other sources of ignition. Minimize contact with material. Containers may rupture or explode if exposed to heat.
Materials to avoid	:	Oxidizing materials, halo carbons, halogens, acids.
Hazardous decomposition products	:	Thermal decomposition products: miscellaneous decomposition products.

11. Toxicological Information

The components of this material have been reviewed in various sources and the following selected endpoints are published:

PROPYLENE (115-07-1) : Inhalation LC50 Rat: 658 mg/L/4H

Component Carcinogenicity

ACGIH : A4 – Not classifiable as a Human Carcinogen
IARC : Monograph 60 [1994]; Supplement 7 [1987] (Group 3 (not classifiable))

Target Organs

PROPYLENE (115-07-1) : Central nervous system

Additional Data

Stimulants such as epinephrine may induce ventricular fibrillation.

12. Ecological Information

No LOEL ecotoxicity data are available for this product's components.

13. Disposal Considerations

Waste from residues / unused products : Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001.
Contaminated packaging : Return cylinder to supplier.

14. Transport Information

DOT (US only)

Proper shipping name : Propylene
Class : 2.1
UN/ID No. : UN1077
Labeling : Flammable Gas

15. Regulatory Information

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

PROPYLENE (115-07-1)
SARA 313 : 1.0% de minimis concentration

SARA 311/312

Acute: Yes
Chronic: No
Fire: Yes
Reactive: No
Pressure: Yes

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
PROPYLENE	115-07-1	Yes	Yes	Yes	Yes	Yes	Yes

Not regulated under California Proposition 65.