



ACCORDING TO US CFR 1910.1200

1. SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name	PROPYLENE.
Synonym(s)	Propene, methylethene, methylethylene, 1-propene, 1-propylene, refrigerant gas R1270
CAS No.	115-07-1
EC No.	204-062-1

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified Use(s)	Industrial gas.
Uses Advised Against	Not known.

1.3 Details of the supplier of the safety data sheet

Company Identification	Hudson Technologies Company
Address	PO Box 1541 One Blue Hill Plaza Pearl River, New York USA
Postal code	10965
Telephone	+1 (800) 953 2244
Fax	+1 (845) 512 6070
E-mail	information@hudsontech.com

1.4 Emergency telephone number

Company	+1 (800) 501 4376
CHEMTREC (U.S.)	+1 (800) 424 9300
INTERNATIONAL	+1 (703) 527 3887

2. SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

US CFR 1910.1200 Flam. Gas 1: Extremely flammable gas.
 Gases under pressure; Press. Gas; Liquefied gas.

2.2 Label elements

Product Name PROPYLENE.

Hazard Pictogram(s)



GHS02



GHS04

Signal Word(s) Danger.

Hazard Statement(s)

H220: EXTREMELY FLAMMABLE GAS.
 H280: CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED.
 OSHA-H01: MAY DISPLACE OXYGEN AND CAUSE RAPID SUFFOCATION.
 CGA-HG04: MAY FORM EXPLOSIVE MIXTURES WITH AIR.
 CGA-HG01: MAY CAUSE FROSTBITE.

Precautionary Statement(s)

P202: Do not handle until all safety precautions have been read and understood.
 P262: Do not get in eyes, on skin, or on clothing.
 P271+P403: Use and store only outdoors or in a well-ventilated place.
 P304, P340, P313: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention.
 P302, P336, P315: IF ON SKIN: Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical advice/attention.

2.3 Other hazards

Can form explosive mixture with air.
 May cause asphyxiation when concentrations are sufficient to reduce oxygen below safe breathing levels.
 May cause frost-bite.

2.4 Additional Information

CGA-PG05: Use a back flow preventive device in the piping.
 CGA-PG10: Use only with equipment rated for cylinder pressure.
 CGA-PG06: Close valve after each use and when empty.
 CGA-PG02: Protect from sunlight when ambient temperature exceeds 52 °C (125 °F).
 CGA-PG27: Read and follow the Safety Data Sheet (SDS) before use.
 This SDS is available in languages other than English.

3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENT(S)	Common Names	CAS No.	%W/W	Hazard Statement(s)	Hazard Pictogram(s)
Propene propylene	Propene, methylethene, methylethylene, 1-propene, 1-propylene, refrigerant gas R1270	115-07-1	100	Flam. Gas 1; H220 Press. Gas, Liquefied gas; H280	GHS02 GHS04

4. SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing has stopped, apply artificial respiration. Get medical attention.

Skin Contact Flush skin with large amounts of water. Thaw frosted parts with lukewarm water. Do not rub affected area. If symptoms persist, obtain medical attention.

Eye Contact	Flush eyes with water for at least 15 minutes while holding eyelids open. If symptoms persist, obtain medical attention.
Ingestion	Unlikely route of exposure.
4.2 Most important symptoms and effects, both acute and delayed	Inhalation: High concentrations: Headache, Dizziness, Confusion, Loss of coordination, Nausea, Drowsiness, Unconsciousness.
4.3 Indication of any immediate medical attention and special treatment needed	Treat symptomatically.

5. SECTION 5: FIREFIGHTING MEASURES

Extremely flammable gas. Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

5.1 Extinguishing media

Suitable Extinguishing media Use water spray, dry powder or carbon dioxide to extinguish.

Unsuitable extinguishing media None.

5.2 Special hazards arising from the substance or mixture

Contains gas under pressure; may explode if heated. The gas is heavier than air and spreads along ground. Can form explosive mixture with air. Decomposes in a fire giving off toxic fumes: Carbon monoxide, Carbon dioxide.

5.3 Advice for fire-fighters

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. If it is safe to do so, containers should be removed from fire area because they are likely to rupture under fire conditions. Keep containers cool by spraying with water if exposed to fire.

6. SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate area. Eliminate all ignition sources if safe to do so. Shut off leaks if without risk. Ensure adequate ventilation. Avoid breathing gas. Wear appropriate personal protective equipment, avoid direct contact.

6.2 Environmental precautions

Do not allow to enter drains, sewers or watercourses.

6.3 Methods and material for containment and cleaning up



Allow small spillages to evaporate provided there is adequate ventilation.

6.4 Reference to other sections

See Also Section 8, 13.

7. SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Provide sufficient ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid breathing gas. Avoid contact with skin and eyes. Use non-sparking hand tools and explosion proof electrical equipment. The vapour is heavier than air; beware of pits and confined spaces. Wear protective gloves/protective clothing/eye protection/face protection. Do not drag, roll, slide or drop cylinders. Use a suitable hand truck design for cylinder movement. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. Never insert an object into valve cap openings. Doing so may damage valve causing a leak to occur. Secure cylinders in an upright position at all times, close all valves when not in use. Keep closed even when empty. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

7.2 Conditions for safe storage, including any incompatibilities

Protect from sunlight. Store in a well-ventilated place.

Storage temperature

<125°F (52°C)

Storage life

Stable under normal conditions.

Incompatible materials

Air, Oxidizing agents, Halogens.

8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note
Propene propylene	115-07-1	500				TLV (ACGIH)

Remark

ACGIH = American Conference of Governmental Industrial Hygienists

8.2 Exposure controls

Appropriate engineering controls Use non-sparking ventilation systems, approved explosion-proof

equipment, and intrinsically safe electrical systems. Ensure adequate ventilation.

Personal protection equipment



Eye Protection

Wear suitable eye/face protection.



Skin protection

Wear suitable gloves.



Respiratory protection

Wear suitable respiratory protective equipment if exposure to high levels of material is likely.

Thermal hazards

Not applicable.

9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Gas. Color: Colorless.
Odor	Stenchant often added. Sweetish.
Odor threshold	Not established.
pH	Not applicable.
Melting point/freezing point	-301.45°F (-185.25°C)
Initial boiling point and boiling range	-53.9°F (-47.72°C)
Flash Point	--162°F (107.8°C) TCC
Evaporation rate	Not applicable.
Flammability (solid, gas)	Extremely flammable gas.
Upper/lower flammability or explosive limits	2 – 11.1Vol-%



SAFETY DATA SHEET

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Vapor pressure	10.2bar (132.81psig) @ 70°F (21.1°C), 1 atm
Vapor density	Not available.
Density (g/ml)	0.5139g/cm ³ @ 20°C
Relative density	0.6
Solubility(ies)	Solubility (Water): Soluble in water. (384mg/l) Solubility (Other): Not available.
Partition coefficient: n-octanol/water	Log Pow = 1.77
Auto-ignition temperature	851°F (455°C)
Decomposition Temperature (°C)	Not available.
Viscosity	Not applicable.
Explosive properties	Can form explosive mixture with air.
Oxidizing properties	Not oxidizing.
9.2 Other information	Not known.

10. SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical Stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Can form explosive mixture with air.

10.4 Conditions to avoid

Keep away from heat and sources of ignition.

10.5 Incompatible materials

Air, Oxidizing agents, Halogens.

10.6 Hazardous decomposition product(s)

No hazardous decomposition products known.

11. SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity - Ingestion	Low acute toxicity.
Acute toxicity - Skin Contact	Low acute toxicity.
Acute toxicity - Inhalation	Low acute toxicity.
Skin corrosion/irritation	Non-irritant.
Serious eye damage/irritation	Non-irritant.
Skin sensitization data	Not classified.
Respiratory sensitization data	Not classified.
Germ cell mutagenicity	There is no evidence of mutagenic potential.
Carcinogenicity	No evidence of carcinogenicity.
Reproductive toxicity	Not classified.
Lactation	Not classified.
STOT - single exposure	None anticipated.
STOT - repeated exposure	None anticipated.
Aspiration hazard	Not classified.

11.2 Other information

Not known.

12. SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity - Aquatic invertebrates	Low toxicity to invertebrates.
Toxicity - Fish	Low toxicity to fish.
Toxicity - Algae	Low toxicity to algae.
Toxicity - Sediment	Not classified.

Compartment

Toxicity - Terrestrial	Not classified.
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Compartment

12.2. Persistence and Degradation

Readily biodegradable.

12.3. Bioaccumulative potential

The product has low potential for bioaccumulation.

12.4. Mobility in soil

Not applicable.

12.5 Other adverse effects

None anticipated.

13. SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Containers must not be punctured or destroyed by burning, even when empty. Waste gas should be flared through a suitable burner with flash back arrestor. Refer to manufacturer/supplier for information on recovery/recycling.

13.2 Additional Information

Disposal should be in accordance with local, state or national legislation.

14. SECTION 14: TRANSPORT INFORMATION

14.1 UN number

UN No. 1077

14.2 UN proper shipping name

UN proper shipping name PROPYLENE.

14.3 Transport hazard class(es)

ADR/RID Class 2.1
 IMDG Class 2.1
 IMDG EMS Not available

ICAO/IATA

Excepted Quantities E0
 Passenger and Cargo Aircraft Forbidden for transport by air.

Limited Quantities Packing

Instructions

Passenger and Cargo Aircraft Forbidden for transport by air.
 Limited Quantities Max net Qty

Passenger and Cargo Aircraft Forbidden for transport by air.
 Max net Qty

Passenger and Cargo Aircraft Forbidden for transport by air.
 Max net Qty

Special Provisions A1
 Emergency Response 10L
 Guidebook (ERG) Code
 ADR Classification Code 2F

ADR HIN 23
 ADR Transport Category 2
 Tunnel Restriction Code B/D
 Emergency Action Code 2YE
 Advice on Additional Personal Protection (APP) Not applicable
 14.4 Packing group
 Packing group Not applicable
 Labels 2.1



Special Provisions Not applicable
 Limited Quantities 0
 Excepted Quantities E0
 Mixed Packing Instructions for Packages P200
 Special Packing Provisions for Packages Not applicable

Mixed Packing Instructions for Packages MP9

14.5 Environmental hazards

Environmental hazards Not classified as a Marine Pollutant.

14.6 Special precautions for user

Special precautions for user Not known.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Packing Instructions for Portable (M) T50

Tanks

Special Provisions for Portable Tanks Not applicable

Tank Code for Tanks PxBN(M)

Special Provisions for Tanks TA4 TT9

Vehicle for Tank Carriage FL

Special Provisions for Carriage - Packages Not applicable



Special Provisions for Carriage - Not applicable
Bulk
Special Provisions for Carriage - CV9 CV10 CV36
Loading, Unloading and Handling
Special Provisions for Carriage - S2 S20
Operation

15. SECTION 15: REGULATORY INFORMATION

15.1 Federal

Toxic and hazardous substances Not listed.

(29 CFR 1910; Subpart Z)

National emission standards for Not listed.

hazardous air pollutants (40 CFR

61.01)

Title III Consolidated List of Lists Propene propylene (CAS No.: 115-07-1)

TSCA (Toxic Substance Control Propene propylene (CAS No.: 115-07-1)
Act)

CAA 602 - Ozone Depleting Not listed.

Substances (ODS)

15.2 State

State Right to Know Lists Listed in: New Jersey, Pennsylvania, Massachusetts.

Proposition 65 (California) Not listed.

15.3 Other

OSPAR List of Chemicals for Not listed.

Priority Action

NTP (National Toxicology Not listed.

Program)

OSHA Not listed.

(List of Highly Hazardous

Chemicals, Toxics and

Reactives)

IARC (International Agency for Propene propylene (CAS No.: 115-07-1)

Research on Cancer)

16. SECTION 16: OTHER INFORMATION

The following sections contain 1-16 revisions or new statements:

NFPA		HMIS	
Health	2	Health	1
Fire	4	Flammability	4
Instability	1	Physical hazards	2

LEGEND:

Hazard Pictogram(s)



GHS02



GHS04

Hazard Statement(s)

H220: Extremely flammable gas.
H280: Contains gas under pressure; may explode if heated.

Precautionary Statement(s)

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: Eliminate all ignition sources if safe to do so.
P410+P403: Protect from sunlight. Store in a well-ventilated place.

Additional Information required by Federal Standard 313 Rev. E:

Contract or Solicitation Number: SPE4A6-16-D-0226
Prime Contractor: Hudson Technologies, Inc.
Prime Contractor CAGE: 7DSQ0

National Stock Number (NSN): 6830015175807



Specification Reference:

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