

Enviro-Safe R290 Refrigerant Cylinder

1 PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: Enviro-Safe R290 Refrigerant Cylinder
SDS Number: 8010-8015
Revision Date: 3/12/2021
Version: 3.0
Product Use: Refrigerant for R290 systems

Supplier Details: Enviro-Safe Refrigerants, Inc.
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2 HAZARDS IDENTIFICATION

Classification of Substance

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

Physical, Flammable Gases, 1
 Physical, Gases Under Pressure, Compressed Gas

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: **DANGER**

GHS Hazard Pictograms:



GHS Hazard Statements:

H220 - Extremely flammable gas
 H280 - Contains gas under pressure; may explode if heated
 OSHA-H01 - May displace oxygen and cause rapid suffocation

GHS Precautionary Statements:

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.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Ingredients:		
CAS#	%	Chemical Name:
68476-85-7	100%	Petroleum gases, liquefied

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FIRST AID MEASURES

4.1. Description of First Aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.

4.2. Most Important Symptoms and Effects, Both Acute and Delayed

Symptoms/Injuries: Gas can be toxic as simple asphyxiant by displacing oxygen from the air. Contact with product may cause cold burns or frostbite.

Symptoms/Injuries After Inhalation: Gas can be toxic as a simple asphyxiant by displacing oxygen from the air.

Symptoms/Injuries After Skin Contact: May cause frostbite. May cause skin irritation.

Symptoms/Injuries After Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

Symptoms/Injuries After Ingestion: Do not induce vomiting. Immediately call a POISON CENTER or doctor/physician.

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

If exposed or concerned, get medical advice and attention.

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FIRE FIGHTING MEASURES

Flash Point: -104°C (-155.2°F)

Autoignition Temperature: 467.22°C (873°F)

Lower Explosive Limit: 2.15%

Upper Explosive Limit: 9.6%

5.1. Extinguishing Media

Suitable Extinguishing Media: Dry powder, foam, carbon dioxide, alcohol-resistant foam.

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

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Flammable liquid.

Explosion Hazard: Heat may build pressure, rupturing closed containers, spreading fire and increasing risks of burns and injuries.

Reactivity: May explode if heated. Reacts with strong oxidants causing fire and explosion hazard.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution fighting any chemical fire.

Firefighting Instructions: In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. Use water spray or fog for cooling exposed containers.

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

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ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid all contact with skin, eyes, or clothing. Avoid breathing (vapor, mist, spray). Use special care to avoid static electric charges. Keep away from heat, sparks, open flames, hot surfaces. No smoking.

6.1.1. For Non-emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel. Eliminate ignition sources.

6.1.2. For Emergency Responders

Protective Equipment: Equip clean up crew with proper protection.

Emergency Procedures: Stop leak if safe to do so. Eliminate ignition sources. Ventilate area. Evacuate unnecessary personnel.

6.2. Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely. Spills should be contained with mechanical barriers. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

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7 HANDLING AND STORAGE

Handling Precautions:	<p>7.1. Precautions for Safe Handling Precautions for Safe Handling: Personnel should be trained to regularly inspect equipment such as pumps, hoses, and valves. Do not breathe gas. Ensure there is adequate ventilation. Close valve after each use and when empty. Open valve slowly to avoid pressure shock. Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and again when leaving work.</p>
Storage Requirements:	<p>7.2. Conditions for Safe Storage, Including Any Incompatibilities Technical Measures: Comply with applicable regulations. Keep at temperatures below 52 °C/125 °F. Storage Conditions: Store in a dry, cool and well-ventilated place. Store locked up. Incompatible Products: Heat sources. Oxidizers.</p> <p>7.3. Specific End Use(s): Refrigerant</p>

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:	Alarm detectors should be used when toxic gases may be released. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.
Personal Protective Equipment:	<p>HMIS PP, F Safety Glasses, Gloves, Apron, Dust Respirator</p> <p>Petroleum gases, liquefied cas#:(68476-85-7) [100%]</p> <p>Gas mask. Protective goggles. Gloves. Protective clothing.</p> <p>Materials for Protective Clothing: Chemically resistant materials and fabrics. Hand Protection: Wear working gloves when handling gas containers. Eye Protection: Safety glasses. Skin and Body Protection: Wear suitable protective clothing. Respiratory Protection: use a NIOSH-approved self-contained breathing apparatus in oxygen deficient atmospheres. Thermal hazard Protection: Wear cold insulating gloves.</p>

Petroleum gases, liquefied cas#:(68476-85-7) [100%]

Petroleum gases, liquefied (68476-85-7)

USA ACGIH - ACGIH TWA (ppm): 1000ppm
 USA NIOSH - NIOSH REL (TWA) (mg/m3): 1800mg/m3
 USA NIOSH - NIOSH REL (TWA) (ppm): 1000ppm
 USA IDLH - US IDLH (ppm): 2100ppm (10% LEL)
 USA OSHA - OSHA PEL (TWA) (mg/m3): 1800mg/m3
 USA OSHA - OSHA PEL (TWA) (ppm): 1000ppm

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colorless	Odor:	Odorless
Physical State:	Gas	Solubility:	No data available
Odor Threshold:	No data available	Freezing or Melting Point:	-151.67°C (-241°F)
Specific Gravity or Density:	No data available	Flash Point:	No data available
Viscosity:	No data available	Vapor Density:	1.52
Boiling Point:	-46.67°C (-52°F)	Autoignition Temperature:	467.22°C (873°F)
Partition Coefficient:	1.09	Upper Flammability Limit and Lower Flammability Limit:	9.6% / 2.15%
Vapor Pressure:	861.8 kPa (125 psi) @ 21.1°C (70°F)		
Potentia Hydrogenii:	No data available		
Evaporation Rate:	No data available		

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Decompression Temperature: No data available

10 STABILITY AND REACTIVITY

Reactivity: Contains gas under pressure; may explode if heated. Reacts with oxidants causing fire and explosion hazard.

Chemical Stability: Stable under recommended handling and storage conditions (see Section 7).

Conditions to Avoid Identification: Direct sunlight. Extremely high or low temperatures. Ignition sources. Incompatible materials.

Materials to Avoid Identification: Heat. Strong oxidizers.

Hazardous Decomposition: Carbon oxides (CO, CO₂).

Hazardous Polymerization: Hazardous polymerization will not occur.

11 TOXICOLOGICAL INFORMATION

Petroleum gases, liquefied cas#:(68476-85-7) [100%]

Petroleum gases, liquefied cas#(68476-85-7)

Information on Toxicology
 Acute Toxicity: Not classified
 LC50 Inhalation Rat: 658mg/l/4h
 Petroleum Oil: > 2000 mg/kg
 LD 50 Oral Rat: > 2000 mg/kg
 LD50 Dermal Rat: > 2000 mg/kg
 LC50 Inhalation Rat: > 2000 mg/kg

Skin Corrosion/Irritation: Not classified
 Serious Eye Damage/Irritation: Not classified
 Respiratory or Skin Sensitiation: Not classified
 Germ Cell Mutagenicity: Not classified
 Carcinogenicity: Not classified
 Reproductive Toxicity: Not classified
 Specific Target Organ Toxicity (Single Exposure): Not classified
 Specific Target Organ Toxicity (Repeated Exposure): Not classified
 Aspiration Hazard: Not classified

12 ECOLOGICAL INFORMATION

Petroleum gases, liquefied cas#:(68476-85-7) [100%]

Information on Ecology
 Toxicity: No additional information
 Persistence and Degradability: No additional information available
 Bioaccumulative Potential ---
 Enviro-Safe Oil Charge 3
 Log Pow: < 1
 Petroleum gases, liquefied (68476-85-7)
 Log Pow: 2.3
 Mobility in Soil: No additional information available
 Other Adverse Effects: No additional information available

13 DISPOSAL CONSIDERATIONS

Petroleum gases, liquefied cas#:(68476-85-7) [100%]

Information on Disposal

Waste Treatment Methods

Waste Disposal Recommendation: Dispose of waste in accordance with all local, regional, national, provincial, territorial and international

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regulations.

Additional Information: Empty product containers may contain hazardous residue. Do not reuse empty containers without commercial cleaning or reconditioning.

14	TRANSPORT INFORMATION
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14.1. In Accordance with DOT

Proper Shipping Name: PETROLEUM GASES, LIQUEFIED

Hazard Class: 2.1

Identification Number: UN1075

14.2. In Accordance with IMDG

Proper Shipping Name: PETROLEUM GASES, LIQUEFIED

Hazard Class: 2.1

Identification Number: UN1075

Label Codes: 2.1

EmS-No. (Fire): F-D

EmS-No. (Spillage): S-U

14.3. In Accordance with IATA

Proper Shipping Name: PETROLEUM GASES, LIQUEFIED

Identification Number: UN1075

Hazard Class: 2

Label Codes: 2.1

ERG Code (IATA): 10L



15	REGULATORY INFORMATION
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[%] RQ (CAS#) Substance - Reg Codes

[100%] Petroleum gases, liquefied (68476-85-7) MASS, OSHAWAC, PA, TSCA, TXAIR

This product does not contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

Regulatory Code Legend

MASS = MA Massachusetts Hazardous Substances List

OSHA = OSHA Workplace Air Contaminants

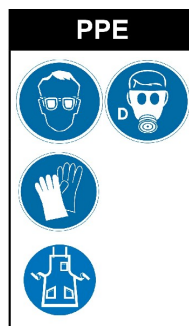
PA = PA Right-To-Know List of Hazardous Substances

TSCA = Toxic Substances Control Act

TXAIR = TX Air Contaminants with Health Effects Screening Level

16	OTHER INFORMATION
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HMIS	
HEALTH	<input type="checkbox"/> <input type="checkbox"/>
FLAMMABILITY	<input type="checkbox"/>
PHYSICAL HAZARD	<input type="checkbox"/>
PERSONAL PROTECTION	<input type="checkbox"/> F



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