# Enviro-Safe 502a Cylinders

## 1 PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier:** Enviro-Safe 502a Cylinders
**SDS Number:** 1095
**Revision Date:** 3/18/2021
**Version:** 3.0
**Product Description:** Refrigerant

**Supplier Details:** Enviro-Safe Refrigerants, Inc.
400 Hanna Dr.
Pekin, IL 61554

**Contact:** Randy Price
**Phone:** 309-346-1110
**Fax:** 309-346-1237
**Email:** info@es-refrigerants.com
**Internet:** www.es-refrigerants.com
**Emergency:** CHEMTREC 1-800-424-9300

## 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.
CGA-MP01 - IF ACCIDENTLY INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention.

## 3 COMPOSITION/INFORMATION ON INGREDIENTS

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

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## 4 FIRST AID MEASURES

**Inhalation:** If symptoms develop, move to fresh air and keep at rest in a position comfortable for breathing. Immediatley call a POISON CENTER or doctor/physician.

**Skin Contact:** If frostbite or freezing occurs, immediately flush with plenty of lukewarm water to GENTLY warm the affected area. Do not use hot water. Do not rub affected area. Get immediate medical attention.

**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.

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

**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 a simple asphyxiant by displacing oxygen from the air. Refrigerated liquefied gas. Contact with product may cause cold burns or frostbite.

**Symptoms/Injuries After Ingestion:** Ingestion is an unlikely route of exposure for gas.

**Symptoms/Injuries After Inhalation:** Asphyxiant gas.

**Symptoms/Injuries After Skin Contact:** May cause frostbite.

**Symptoms/Injuries After Eye Contact:** Contact with the liquefied gas causes frostbite.

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

If exposed or concerned, get medical advice and attention.

## 5 FIRE FIGHTING MEASURES

**Lower Explosive Limit:** 2.15%

**Upper Explosive Limit:** 9.6%

**5.1. Extinguishing Media**

**Suitable Extinguishing Media:** Dry powder, foam, carbon dioxide.

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

**5.2. Special Hazards Arising from the Substance or Mixture**

**Fire Hazard:** Highly flammable liquid and vapor. Vapors may travel to source of ignition and flash back.

**Explosion Hazard:** May for flammable/explosive vapor-air mixture.

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

**5.3. Advice for Firefighters**

**Precautionary Mearsure Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: evacuate area. Fight fire remotely due to the risk of explosion.

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

## 6 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. No Non-emergency Personnel**

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

**Emergency Procedures:** Evacuate unnecessary personnel.

**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.

**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 obsorbents 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:**

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.

**Storage Requirements:**

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Keep at temperatures below 52C/125F.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep in fireproof place. Store locked up.

Incompatible Products: Heat sources. Oxidizers.

7.3. Specific End Use(s):

Refrigerant

## 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls:**

Appropriate 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:**

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

Gas mask. Protective goggles. Gloves. Protective clothing.

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.

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:** | Clear, colorless gas | | |
| **Physical State:** | Gas | **Odor:** | Odorless |
| **Odor Threshold:** | No data available | **Solubility:** | No data available |
| **Specific Gravity or Density:** | 0.5066 (water=1) | **Freezing or Melting Point:** | - 151.67 °C (305 °F) |
| **Viscosity:** | No data available | **Flash Point:** | No data available |
| **Boiling Point:** | - 46.67 °C (52 °F) | **Vapor Density:** | 1.52 |
| **Partition Coefficient:** | No data available | **Autoignition Temperature:** | 467.22 °C (873 °F) |
| **Vapor Pressure:** | 861.8 kPa (125 psi) @22.1 °C (70 °F) | **Upper Flammability Limit and Lower Flammability Limit:** | 9.6 % / 2.15 % |
| **Potentia Hydrogenii:** | No data available | | |
| **Evaporation Rate:** | No data available | | |
| **Decompression Temperature:** | No data available | | |

## 10 STABILITY AND REACTIVITY

# Enviro-Safe 502a Cylinders

| | |
|---|---|
| **Reactivity:** | Contains gas under pressure; may explode if heated. Reacts with oxidants causing fire/explosion hazard. |
| **Chemical Stability:** | Stable under recommended handling and storage conditions (see section 7). |
| **Conditions to AvoIdentification:** | Direct sunlight. Extremely high or low temperatures. Open flame. Heat. Sparks. |
| **Materials to AvoIdentification:** | 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)

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)

Information on Ecology
Toxicity: No additional information
Persistence and Degradability: No additional information available
Bioaccumulative Potential ---
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)

Information on Disposal

Waste Treatment Methods

Waste Disposal Recommendation: Dispose of waste in accordance with all local, regional, national, provincial, territorial and international regulations.
Additional Information: Empty product containers may contain hazardous resideu. Do not reuse empty containers without commercial cleaning or reconditioning.

## 14 TRANSPORT INFORMATION

**14.1. In Accordance with DOT**
**Proper Shipping name:** PETROLEUM GASES, LIQUEFIED or Liquefied petroleum gas
**Hazard Class:** 2.1

# Enviro-Safe 502a Cylinders

**Identification Number:** UN1075
**Label Codes:** 2.1
**14.2. In Accordance with IMDG**
**Proper Shipping Name:** PETROLEUM GASES, LIQUEFIED
**Hazard Class:** 2
**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

[%] RQ (CAS#) Substance - Reg Codes
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[--%] Petroleum gases, liquefied (68476-85-7) MASS, OSHAWAC, PA, TSCA, TXAIR

Regulatory Code Legend
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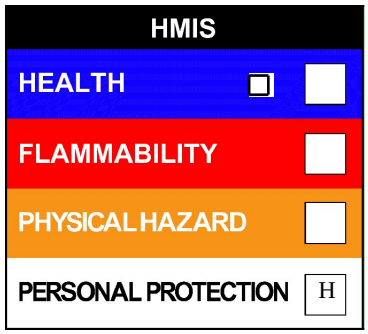
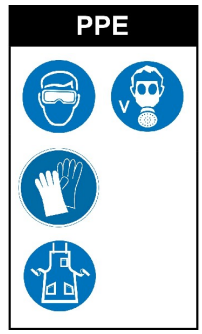
MASS = MA Massachusetts Hazardous Substances List
OSHAWAC = OSHA Workplace Air Contaminants
PA = PA Right-To-Know List of Hazardous Substances
TSCA = Toxic Substances Control Act
TXAIR = TX Air Contaminants with Health Effects Screening Level

## 16 OTHER INFORMATION

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Author: Jeanette Akright
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