Enviro-Safe 1234YF Arctic Air

1 PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: Enviro-Safe 1234YF Arctic Air
SDS Number: 2091
Revision Date: 10/8/2024
Version: 2.5
Product Use: Boost A/C Cooling Performance

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

Phone: 309-346-1110
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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.
P410 + P403 - Protect from sunlight. Store in a well-ventilated place.

Hazards not Otherwise Classified (HNOC) or not Covered by GHS

3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Ingredients

CAS#	%	Chemical Name
68476-85-7		Petroleum gases, liquefied
64742-52-5		Distillates, petroleum, hydrotreated heavy naphthenic

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4 FIRST AID MEASURES

Inhalation: When symptoms occur: go inot open air and ventilate suspected area. Immediately 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 simple asphyxiant by displacing oxygen from the air. Refrigerated liquefied gas. Contact with product may cause cold burns or frostbite.
Symptoms/Injuries After Inhalation: Asphyxiate gas.
Symptoms/Injuries After Skin Contact: May cause frostbite. May cause an allergic skin reaction.
Symptoms/Injuries After Eye Contact: Contact with the liquefied gas causes frostbite.
Symptoms/Injuries After Ingestion: Ingestion is an unlikely route of exposure for a gas.

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

5.1. Extinguishing Media

Suitable Extinguishing Media: Dry chemical powder, alcohol-resistant foam, carbon dioxide.
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 gas.
Explosion Hazard: Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.
Reactivity: Contains gas under pressure; may explode if heated. Reacts with strong oxidants causing fire and explosion hazard.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when 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 repiratory protection.

6 ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Use special care to avoid static electric charges. Keep away from open flames, hot surfaces and sources of ignition. No smoking. Do not get ineyes, on skin, or on clothing.

6.1.1. No 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. Ventilate area.

6.2. Environmental Precautions

Avoid release to the environment

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Stop leak without risks if possible. Do not take up in combustible material such as: sa dust or cellulosic material.
Methods for CLeaning Up: 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 emptyl 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.
7.3. Specific End Use(s): Boost A/C Cooling Performance

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

Alarm detectors should be used when asphyxiant gases may be released. Emergency eye was 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:**	No data available
Odor Threshold:	No data available	**Solubility:**	No data available
Specific Gravity or Density:	.540	**Freezing or Melting Point:**	-166 °C (-267.1 °F)
Viscosity:	No data available	**Flash Point:**	-104 °C (-155 °F)
Boiling Point:	-34.7 °C	**Vapor Density:**	1.76
Partition Coefficient:	< 1	**Autoignition Temperature:**	862.8 °C (1585 °F)
Vapor Pressure:	70 @ 21.1 °C	**UFL / LFL:**	8.5 % / 1.9 %
Potentia Hydrogenii:	No data available		
Evaporation Rate:	Rapid		
Decompression Temperature:	No data available		

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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
Conditions to AvoIdentification: Direct sunlight. Extremely high or low temperatures. Open flame. Heat. Sparks.
Materials to AvoIdentification: Strong oxidizing agents.
Hazardous Decomposition: Carbon oxides
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)

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.

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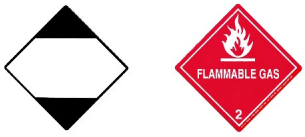
14 TRANSPORT INFORMATION

14.1. In Accordance with DOT
Proper Shipping Name: Consumer Commodity, ORM-D
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
Marine Pollutant: No
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
Marine Pollutant: No



15 REGULATORY INFORMATION

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

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

[--%] Distillates, petroleum, hydrotreated heavy naphthenic (64742-52-5) NJHS, TSCA, TSCAACTV
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
NJHS = NJ Right-to-Know Hazardous Substances
OSHAWAC = OSHA Workplace Air Contaminants
PA = PA Right-To-Know List of Hazardous Substances
TSCA = Toxic Substances Control Act
TSCAACTV = TSCA Active Chemicals
TXAIR = TX Air Contaminants with Health Effects Screening Level

16 OTHER INFORMATION

Disclaimer: Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

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