



Refrigerant EF- 22 Cylinders

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision Date: 07/30/2014 Date of issue: 07/30/2014

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

1.1. Product Identifier TM

Product Name: ecofreeez refrigerant EF-22 Cylinders

1.2. Intended Use of the Product Use of the Substance/Mixture: Refrigerant

1.3. Name, Address, and Telephone of the Responsible Party

Company

Ecofreeez, Inc

57 Pearl Street

Brooklyn, NY 11201

347-442-9400

1.4. Emergency Telephone Number

Emergency Number : 1-800-524-8400

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture Classification (GHS-US)

Simple Asphy

Flam. Gas 1 H220 Liquefied gas H280

2.2. Label Elements GHS-US Labeling

Hazard Pictograms (GHS-US) : GHS02 GHS04

Signal Word (GHS-US) : Danger

Hazard Statements (GHS-US) : H220 - Flammable gas

H280 - Contains gas under pressure; may explode if heated H380 - May displace oxygen and cause rapid suffocation

Precautionary Statements (GHS-US) : P210 - Keep away from heat, hot surfaces, open flames, sparks -

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.

2.3. Other Hazards

Not available

2.4. Unknown Acute Toxicity (GHS-US) No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture



Name: Petroleum gases, liquefied

Product identifier: (CAS No) 74-98-6 - 100%

Classification (GHS-US): Simple Asphy Flam. Gas 1, H220 Liquefied gas, H280

Full text of H-phrases: see section 16

SECTION 4: 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 (show the label where possible).

First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. Immediately call a POISON CENTER or doctor/physician.

First-aid Measures After 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.

First-aid Measures 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.

First-aid Measures After Ingestion: Do not induce vomiting. Immediately call a POISON CENTER or doctor/physician.

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. 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. Symptoms/Injuries

After Ingestion: Ingestion is an unlikely route of exposure for a gas. Chronic Symptoms: Not available

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

If exposed or concerned, get medical advice and attention.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Water spray, dry powder, or carbon dioxide can be directed at flame to reduce fire intensity.

Unsuitable Extinguishing Media: Do not extinguish flames unless leak can be stopped.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Extremely flammable gas.

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

Reactivity: Contains gas under pressure; may explode if heated.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.



Firefighting Instructions: If possible, stop flow of gas. Use water to cool fire-exposed tanks, surroundings and to protect personnel working on shut off. If leak cannot be stopped, evacuate area. Fight fire remotely due to the risk of explosion. Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 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 in eyes, on skin, or on clothing. Do not breathe gas.

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 cleanup 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.

Methods for Cleaning Up: Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Section 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

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.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Cylinders should be stored upright with valve protection cap in place and firmly secured to prevent falling. Keep at temperatures below 52°C / 125°F.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep in fireproof place. Store locked up. Store away from strong oxidizing agents, chlorine dioxide, excessive heat and/or static discharge.

Incompatible Products: Heat sources. Oxidizing agents.

Special Rules on Packaging: Store in containers fitted with suitable release valve.

7.3. Specific End Use(s) Refrigerant.



SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

Petroleum gases, liquefied (74-98-6)

USA ACGIH: ACGIH TWA (ppm) 1000 ppm

USA NIOSH: NIOSH REL (TWA) (mg/m³) 1800 mg/m³

USA NIOSH: NIOSH REL (TWA) (ppm) 1000 ppm

USA IDLH: US IDLH (ppm) 2100 ppm (10% LEL)

USA OSHA: OSHA PEL (TWA) (mg/m³) 1800 mg/m³

USA OSHA: OSHA PEL (TWA) (ppm) 1000 ppm

8.2. Exposure Controls

Appropriate Engineering Controls : Alarm detectors should be used when toxic and/or flammable 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 : 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 respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Thermal Hazard Protection : Wear cold insulating gloves.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State : Gas

Appearance : Clear, colorless gas

Odor : Odorless

Odor Threshold : No data available

pH : No data available

Relative Evaporation Rate (butylacetate=1) : No data available

Melting Point : No data available

Freezing Point : - 151.67 °C (305 °F)

Boiling Point : - 46.67 °C (52 °F)

Flash Point : No data available

Auto-ignition Temperature : 467.22 °C (873 °F)

Decomposition Temperature : No data available

Flammability (solid, gas) : No data available

Vapor Pressure : 861.8 kPa (125 psi) at 21.1 °C (70 °F)

Relative Vapor Density at 20 °C : 1.52

Relative Density : 0.5066 (water = 1)



Specific Gravity : 0.5066
Solubility : No data available
Log Pow : < 1
Log Kow : No data available
Viscosity, Kinematic : No data available
Viscosity, Dynamic : No data available
Explosive Properties : No data available
Oxidizing Properties : No data available
Explosive Limits : No data available
Lower Flammable Limit : 2.15 %
Upper Flammable Limit : 9.6 %
9.2. Other Information
Gas group : Liquefied gas

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity: Contains gas under pressure; may explode if heated. Vapor may ignite if exposed to static discharge.
10.2 Chemical Stability: Stable under recommended handling and storage conditions (see section 7).
10.3 Possibility of Hazardous Reactions: Hazardous polymerization will not occur.
10.4 Conditions to Avoid: Direct sunlight. Extremely high or low temperatures. Open flame. Heat. Sparks. Static Discharge.
10.5 Incompatible Materials: Oxidizing agents such as chlorine, permanganates and dichromates.
10.6 Hazardous Decomposition Products: Carbon oxides (CO, CO₂).

11.1. Information On Toxicological Effects

Acute Toxicity : Not classified
Petroleum gases, liquefied (74-98-6) LC50 Inhalation Rat (mg/l) 658 mg/l/4h
Skin Corrosion/Irritation: Not classified
Serious Eye Damage/Irritation: Not classified Respiratory or Skin Sensitization: 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
Symptoms/Injuries After Inhalation: Asphyxiant gas.
Symptoms/Injuries After Skin Contact: May cause frostbite. Exposure may produce an allergic 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. Chronic Symptoms: Not available.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity Harmful to aquatic life with long lasting effects.
12.2. Persistence and Degradability No additional information available



12.3. Bioaccumulative Potential
Petroleum gases, liquefied (74-98-6)

Log Pow

2.3

12.4. Mobility in Soil No additional information available

12.5. Other Adverse Effects

No additional information available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

Additional Information: Empty containers may contain flammable or combustible vapors. Do not reuse without adequate precautions.

SECTION 14: TRANSPORT INFORMATION

In Accordance With ICAO/IATA/IMDG/DOT

14.1. UN Number - Identification Number : UN1075

14.2. UN Proper Shipping Name- DOT Proper Shipping Name : Petroleum gases, liquefied or Liquefied petroleum gas. Hazard Labels (DOT) : 2.1 - Flammable gases

DOT Packaging Exceptions (49 CFR 173.xxx) : 306

DOT Packaging Non Bulk (49 CFR 173.xxx) : 304

DOT Packaging Bulk (49 CFR 173.xxx) : 314;315

Marine pollutant : No

14.3. Additional Information

Emergency Response Guide (ERG) Number : 115

Transport by Sea

DOT Vessel Stowage Location : E - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length, but is prohibited from carriage on passenger vessels in which the limiting number of passengers is exceeded.

DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"

Air Transport

DOT Quantity Limitations Passenger Aircraft/Rail (49 CFR 173.27) : Forbidden

DOT Quantity Limitations Cargo Aircraft Only (49 CFR 175.75) : 150 kg

SECTION 15: REGULATORY INFORMATION

15.1 US Federal Regulations TM

Ecofreeez EF-22 Cylinders

SARA Section 311/312 Hazard Classes

Fire hazard



Sudden release of pressure hazard

Petroleum gases, liquefied (74-98-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2 US State Regulations

Petroleum gases, liquefied (74-98-6)

U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)

U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)

U.S. - Delaware - Accidental Release Prevention Regulations - Sufficient Quantities

U.S. - Delaware - Accidental Release Prevention Regulations - Threshold Quantities

U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities

U.S. - Idaho - Occupational Exposure Limits - TWAs

U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1

U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2

U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity

U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1

U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2.

U.S. - Massachusetts - Right To Know List

U.S. - Michigan - Occupational Exposure Limits - TWAs

U.S. - Minnesota - Hazardous Substance List

U.S. - Minnesota - Permissible Exposure Limits - TWAs

U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances

U.S. - New Jersey - Environmental Hazardous Substances List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - New Jersey - Special Health Hazards Substances List

U.S. - New Jersey - TCPA - Extraordinarily Hazardous Substances (EHS)

U.S. - New York - Occupational Exposure Limits - TWAs

U.S. - Ohio - Accidental Release Prevention - Threshold Quantities

U.S. - Oregon - Permissible Exposure Limits - TWAs

U.S. - Pennsylvania - RTK (Right to Know) List

U.S. - Tennessee - Occupational Exposure Limits - TWAs

U.S. - Texas - Effects Screening Levels - Long Term

U.S. - Texas - Effects Screening Levels - Short Term

U.S. - Vermont - Permissible Exposure Limits - TWAs

U.S. - Washington - Permissible Exposure Limits - STELs

U.S. - Washington - Permissible Exposure Limits – TWAs



SECTION 16: OTHER INFORMATION

Revision date : 07/30/2014

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Compressed gas

Gases under pressure Compressed gas

Flam. Gas 1

Flammable gases Category 1

Liquefied gas

Gases under pressure Liquefied gas

Simple Asphy

Simple Asphyxiant

H220

Extremely flammable gas H280

Contains gas under pressure; may explode if heated

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.