

MATERIAL SAFETY DATA SHEET

FrostyCool 134 Refrigerant

TOLL FREE 24 HOUR EMERGENCY TELEPHONE NUMBER
CHEMTREC 1-800-424-9300

SECTION 1 – IDENTIFICATION

Company: FrostyCool Refrigerants, Inc.
136 Wings Road, Unit 4
Woodbridge, Ontario L4L 6C3
1-800-300-2412

Product Name: FrostyCool 134 Refrigerant **UN Number:** UN1075
Proper Shipping Name: Petroleum Gases Liquefied
Dangerous Goods Hazard Class/Division: 2.1

SECTION 2 – PHYSICAL DESCRIPTION AND/OR PROPERTIES

Appearance/Odor: Clear, Colorless; odor added
Physical State: Gas **Evaporation Rate:** Rapid
Odor Threshold: None available **Freezing Point:** -286°F
Specific Gravity: 0.530 **Coeff. Water/Oil Dist.:** <1
Vapor Density: (est.) 1.64 **Boiling Point:** -36.1°F
pH: N/A **Vapor Pressure:** (PSIG) 85 @ 70°F

SECTION 3 – FIRE OR EXPLOSION HAZARD

Auto Ignition Temperature: 1246°F **Lower Flammable Limit (LEL):** 2.6%
Flashpoint: Not Available **Upper Flammable Limit (UEL):** 9.0%

Extinguish Media: If possible, stop flow of gas. Use water to cool fire-exposed tanks, surroundings and to protect personnel working on shut off. Water spray, dry powder, or carbon dioxide can be directed at flame area to reduce fire intensity. Do not extinguish flames unless leak can be stopped.

Hazardous Combustion Products: Normal combustion forms carbon monoxide.

Sensitivity to Static Discharge: Vapor may ignite if exposed to static discharge.

Explosion Data: Sensitivity to impact. Mixture is not sensitive.

Fire and Explosion Hazard: Flammable vapor may form if allowed to mix with air. Accumulation of gas is an ignition hazard. Vapors are heavier than air and may travel to an ignition source.

SECTION 4 – INGREDIENTS

Hazardous Ingredients: Alkanes **%:** 100 **LD50:** n.ap.
P.E.L. 800 ppm **ACGIH TLV UNITS:** 800 ppm

(FrostyCool Refrigerant contains a trade secret odor of 1% -5% unless otherwise noted.)

SECTION 5 – REACTIVITY DATA

Chemical Stability: This material is chemically stable.

Conditions To Avoid: .Avoid sparks, open flame or any source of ignition.

Incompatible Materials: Avoid contact with strong oxidizing agents such as chlorine, permanganates and dichromate's.

Decomposition Products: This product may produce carbon monoxide with a deficiency of oxygen.

Hazardous Polymerization: will not occur.

Polymerization To Avoid: Keep separate from oxidizing agents.

SECTION 6 – HEALTH HAZARD

As with most flammable products, hydrocarbon refrigerants demand basic common sense during use.

Inhaled/Asphyxiant: This product may cause irritation of the respiratory tract. May also cause headaches or dizziness at moderate exposures. Heavy exposure may cause anemia and irregular heart rhythm, respiratory arrest and death at elevated exposures.

Ingestion: Not likely to occur.

Eye Contact: Irritating if the liquid gets into eyes, with a possible hazard from freezing due to rapid evaporation. Extremely high vapor concentration may also be irritating.

Skin Contact: Exposure to rapidly expanding gas or vaporizing liquid may cause frost damage to tissue. Prolonged contact may irritate the skin and cause dermatitis.

Chronic: Prolonged exposure to this product may cause central nervous system disorder and or damage.

SECTION 7 - FIRST AID

Inhaled: In emergency situations, use proper respiratory protection and immediately remove the victim to fresh air. Administer artificial respiration if breathing has stopped. Seek medical attention promptly in serious cases of over exposure.

Eyes: Flush eyes with tepid water for 15 minutes. Seek immediate medical advice immediately.

Skin: Avoid skin contact with the liquid. Remove contaminated clothing and wash the exposed area with soap and water.

Frostbite: Obtain medical assistance. If medical assistance is not available immediately, place person in a warm area as soon as possible and allow the injured area to warm gradually. DO NOT WARM EXPOSED AREA TO EXCESS HEAT OR COLD.

Ingestion: Unlikely to be a problem, this should not occur.

SECTION 8 - SAFE HANDLING

Spills: Shut off ignition source and source of leak. Evacuate all non-essential personnel from the area. If possible, ventilate the area. Use water spray to disperse vapors. Isolate and ventilate area until gas has dispersed. If the incident is significant seek assistance from local fire, police and other relevant authorities.

Waste Disposal Method: Dispose of product in accordance with local, county state, and federal regulations.

Storage, Handling, Shipping: Store in a cool, well-ventilated area. Store away from strong oxidizing agents, chlorine dioxide, excessive heat and/or static discharge. Cylinders must be

stored and transported in an upright position.

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

SECTION 9 -PERSONAL PROTECTION

Engineering Controls: Use only in a well ventilated area! Ensure there is good ventilation. If additional ventilation is needed use auxiliary ventilation equipment ensuring that all systems are well grounded and spark proof.

Eyes: Wear safety chemical safety glasses with side shields and/or goggles.

Gloves: Use thermal, chemical resistant gloves when handling this product.

Other protective clothing: Long sleeves, pants and close-toed shoes.

Respiratory Protection: If ventilation of the area is not adequate use a NIOSH approved respirator to prevent overexposure by inhalation.

SECTION 10 -PREPARATION

All information provided for this MSDS sheet by FrostyCool Refrigerants Inc. is offered in good faith and is believed to be accurate to the best knowledge of the preparation analyst. The information contained in this document is based on documentation provided by the supplier and other documentation/information available at the date of preparation. FrostyCool does not guarantee the accuracy of this document and this information is offered without warranty, guarantee or liability on the part of the preparation analyst in good faith.