

**MATERIAL SAFETY DATA  
SHEET  
R-11**

**| SECTION 1 - COMPANY IDENTIFICATION/CHEMICAL PRODUCT |**

Recycler: Refrigerants, Inc. Prepared by: Refrigerants, Inc.  
2575 W. Barberry Pl. INFOTRAC  
Denver, CO 80204 EMERGENCY RESPONSE # (800) 535-5053  
303-629-1222 Date Prepared: 11-28-09  
Corporate MSDS Number: MSDSR503

Formula: CC13F Molecular Weight: 137.36

**| SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS |**

Material	CAS Number	%
* METHANE, TRICHOFLUORO (R-11)	75-69-4	100

\* Disclosure as a toxic chemical is required under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

**| SECTION 3 - PHYSICAL/CHEMICAL CHARACTERISTICS |**

Boiling Point : 23.9 C (75 F) pH: Neutral  
Vapor Pressure : 14.7 psia at 25 deg C (77 deg F) Odor : Slight ethereal  
Vapor Density : 4.9 (Air = 1) Form : Liquid  
Density : 1.48 *g/cc* at 25 deg C (77 deg F) % Volatiles : 100 WT%  
Evaporation Rate : >1 (CC14=1) Color : Colorless  
Solubility in Water : 0.1 WT% 25 C (77 deg F) Appearance: Clear

**SECTION 4 - FIRE FIGHTING MEASURES**

**Flammable Properties**

Flash Point : Will not burn  
Flammable limits in Air, % by Volume  
LEL : Not applicable Auto ignition: Not determined  
VEL : Not applicable Auto decomposition : >593 C (> 1099 F)

**Fire and Explosion Hazards:**

Drums may rupture under fire conditions. Decomposition may occur. Self-contained breathing apparatus (SCBA) is required if cylinders rupture or discharge under fire conditions.

Extinguishing Media: As appropriate for combustibles in area.

**| SECTION 5 - HAZARDS IDENTIFICATION**

**Potential Health Effects:**

Inhalation of high concentrations of vapor is harmful and may cause heart irregularities, unconsciousness, or death. Intentional misuse or deliberate inhalation may cause death without warning. Vapor reduces oxygen available for breathing and is heavier than air. Liquid contact can cause frostbite. May cause eye irritation.

**Health Effects:**

Human health effects of overexposure by eye contact with the vapor may include eye irritation with discomfort, tearing, or blurring of vision. Skin contact with the liquid may cause frostbite. Inhalation of the vapors may cause temporary nervous system depression with anesthetic effects such as dizziness, headache, confusion, incoordination, and loss of consciousness; temporary alteration of the heart's electrical activity with irregular pulse, palpitations, or inadequate circulation, or the effects of exclusion of oxygen with grossly excessive exposures.

Individuals with pre-existing diseases of the central nervous or cardiovascular system may have increase susceptibility to the toxicity of excessive exposures.

**Carcinogenicity Information**

None of the components present in this material at concentrations equal to or greater than 0.1 % are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

**EMERGENCY AND FIRST AID PROCEDURES:**

**Inhalation:** If inhaled, immediately remove to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

**Skin Contact:** In case of contact, flush skin with water. Treat for frostbite if necessary by gently warming affected area. Call a physician.

**Eye Contact:** In case of contact, immediately flush eyes with water for at least 15 minutes. Call a physician. **Ingestion:** Ingestion is not considered a potential route of exposure.

**Notes to Physician:**

Because of a possible disturbance of cardiac rhythm, catecholamine drugs, such as epinephrine, should only be used with special caution in situations of emergency life support.

## SECTION 6- STABILITY AND REACTIVITY

Chemical Stability: Material is stable. However, avoid open flames and high temperatures.

Incompatibility with other Materials: Incompatible with alkali or alkaline earth metals - powdered Al, Zn, Be, etc.

Polymerization: Polymerization will not occur.

Other hazards

Decomposition: Decomposition products are hazardous. "FREON" // Refrigerant can be decomposed by high temperatures (open flames, glowing metal surfaces, etc.) forming hydrochloric and hydrofluoric acids and possibly carbonyl halides.

## SECTION 7- CONTROL AND PROTECTIVE MEASURES

Engineering Controls: Normal ventilation for standard manufacturing procedures is generally adequate. Local exhaust should be used when large amounts are released. Mechanical ventilation should be used in low or enclosed places.

Personal Protective Equipment: Impervious gloves and chemical splash goggles should be used when handling liquid. Under normal manufacturing conditions, no respiratory protection is required when using this product. Self-contained breathing apparatus (SCBA) is required if a large release occurs.

Exposure

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PEL (OSHA) : 1,000 ppm, 5,600 mg/m<sup>3</sup> 8 hr. TWA

TLV (ACGIH) : Ceiling 1,000 ppm, 5,620 mg/m<sup>3</sup>, A4

## SECTION 8- HANDLING/STORAGE/ WASTE DISPOSAL

Waste disposal method: Comply with Federal, State, and local regulations. Reclaim by distillation or remove to a permitted waste facility.

Handling: Avoid breathing vapors and liquid contact with the skin and eyes. Use with sufficient ventilation to keep employee exposure below recommended limits.

Storage: Clean, dry area. Do not heat above 52 deg C (125 deg F).

Accidental Release Measures: Ventilate area, especially low or enclosed places where heavy vapors might collect.

Do not flush into sewers. Dike spill. Collect on absorbent material and transfer to steel drums for recovery or disposal. Use self-contained breathing apparatus (SCBA) for large spills.

## SHIPPING INFORMATION

Shipping Name : RQ ENVIRONMENT ALLY HAZARDOUS SUBSTANCE LIQUID, N.O.S.  
(TRICHLOROFLUOROMETHANE)

Hazard Class : 9

UN No. : 3082

DOT/HM LABELS : CLASS 9

Packing Group : III

Shipping Containers: Tank Cars, Tank Trucks and

Drums U.S. FEDERAL REGULATIONS

TSCA Inventory Status : Reported/Included

-No TITLE III HAZARDOUS CLASSIFICATIONS SECTIONS 311, 312

- Yes Acute : Yes Reactivity: No

- See components section Chronic : No Pressure : No

Fire : No

HAZARDOUS CHEMICAL LISTS

SARA E>..remely Hazardous

Substance CERCLA Hazardous

Substance

SARA Toxic Chemical

## OTHER INFORMATION

NFPA, NPCA-HMIS

NPCA-HMIS Rating

Health : 1

Flammability : 0

Reactivity : 1

Personal Protection rating to be supplied by user depending on use condition.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.