

MATERIAL SAFETY DATA SHEET**TRICHLOROFLUOROMETHANE**

NSN: 6830002813036
 Manufacturer's CAGE: OETK4
 Part No. Indicator: 100-R11
 Part Number/Trade Name: REFRIGERANT GAS R-11

General Information

Item Name: TRICHLOROFLUOROMETHANE
 Company Name: RemTec International
 Company's Street: 1100 Haskins Road
 Company's City, State, Zip: Bowling Green, Ohio, 43402, USA
 Company's Information Phone: 419-867-8990 Fax: 419-867-7449
 Company's Emergency Phone: PERS, North America: 800-633-8253
 PERS, International: 801-629-0667
 Date MSDS Prepared: 01.01.2007. Revised at 12/02/2009
 MSDS Preparer's Name: RemTec
 MSDS Serial Number: MSDSR11
 Specification Number: ARI 700
 Spec Type, Grade, Class:
 Hazard Characteristic Code:
 Unit of Issue: Pound Type of Container: Drum
 Unit of Issue Container Quantity: 30, 100, 200 lbs. Net Unit Weight:

Ingredient/Identity Information

Proprietary: No
 Ingredient: Trichlorofluoromethane, CFC 11
 Ingredient Sequence Number: 01
 Percent: 100.00
 NIOSH (RTECS) Number: PB6125000
 CAS Number: 75-69-4
 OSHA PEL: 1,000 ppm, 5,600 mg/m³, 8 Hr. TWA
 ACGIH TLV: Ceiling 1,000 ppm, 5,620 mg/m³, A4; 9596
 Cercla RQ: 5,000 lbs
 Other Recommended Limit:

Physical/Chemical Characteristics

Formulation: CCl₃F Molecular Weight: 137.36
 Appearance and Odor: LIQUID, COLORLESS, SLIGHT ETHEREAL ODOR
 Boiling Point: 23.8°C (75°F)
 Vapor Pressure (14.7°C): 14.7 psia Critical Pressure: 639.5 psia
 Vapor Density (Air=1): 4.9 Liquid Density (25°C): 92.14 lb/ft³
 Density (25°C): 1.48 g/cc
 Decomposition Temperature: UNKNOWN Critical Temperature: 198°C
 Evaporation Rate and Ref: >1.0, (CCl₄=1)
 Solubility in Water (25°C): 0.1 WT%
 Percent Volatiles: 100
 Corrosion Rate (IPY): UNKNOWN

Fire and Explosion Hazard Data

Flash Point:	NON-FLAMMABLE
Extinguishing Media:	Use what is suitable for material on fire.
Special Fire Fighting Procedures:	Wear fire fighting protective equipment and full faced self contained breathing apparatus (NIOSH Approved). Cool fire exposed containers with water spray.
Unusual Fire and Explosive Hazards:	Combustion or heat of fire may produce hazardous Decomposition products and vapors.

Reactivity Data

Stability:	YES
Conditions to Avoid (Stability):	High heat, open flames and other sources of ignition, lighted cigarettes.
Materials to Avoid:	Alkali & Alkaline earth metals, AL/AL powder, granular BA, Lithium shavings, chem. Active metals (NA, K, CA, POWDERED MG, ZN)
Hazardous Decomp Products:	Toxic fumes of fluorides & chlorides. Halogens, Halogen Acids. Possibly Carbonyl Halides such as Phosgene gas.
Hazardous Poly Occur:	NO
Conditions to Avoid (Poly)	NOT APPLICABLE

Health Hazard Data

LD50-LC50 Mixture;	LD50 (Mouse): 1743 mg/kg
Route of Entry	Inhalation: YES Skin: YES Ingestion: YES
Health Hazrd Acute and Chronic:	Vapor is heavier than air and can cause suffocation by Replacing available oxygen for breathing. High concentrations of vapor may cause dizziness, narcosis, cardiac irregularities, unconsciousness or death. Liquid can cause frostbite.
Carcinogenicity	NTP: NO IARC: NO OSHA: NO
Explanation of Carcinogenicity:	NONE
Signs/Symptoms of Overexposure:	Dizziness, shortness of breath, muscular un-coordination, Fatigue, nausea, vomiting, unconsciousness, frostbite, skin Irritation.
Medical Cond Aggravated by Exp:	NONE
Emergency/First Aid Procedures:	Remove victim to fresh air. Give oxygen or CPR if needed. Do not give epinephrine or similar drugs. Eye or skin irritant. Flush with water for 15 minutes. Treat for frostbite. Contact doctor in all cases.

Precautions for Safe Handling and Use

Steps if Material is Released/Spill:	Evacuate & ventilate area. Wear SCBA & full protective clothing-attempt to close valves/repair leaks at source. Absorb liquid with commercial absorbent/shovel in drum, keep out of sewer.
Neutralizing Agent:	NONE
Waste Disposal Method:	Recycle or reclaim by sending to permitted recycling or waste facility. Contact your local environmental officer. Dispose of in accordance with all federal, state and local regulations.
Precautions-Handling/Storing:	Store in cool, dry well ventilated area. Do not place in direct sunlight or heat. Protect from physical damage.
Other Precautions:	Avoid eye and skin contact. Do not breath vapors mists or Sprays. Avoid hot surfaces, open flames, cigarette smoking.

Control Measures

Respiratory Protection:	None normally required for vented work. WEAR NIOSH-Approved self-contained breathing apparatus IF >TLV.
Ventilation:	Local exhaust ventilation. Large release - Mechanical ventilation for low places.
Protective Gloves:	Lined Butyl Gloves
Eye Protection:	Chemical splash goggles
Other Protective Equipment:	Use impervious clothing to minimize exposure. Eye wash and safety shower recommended.
Work Hygienic Practices:	Wash thoroughly after handling and before eating. Do not smoke in area while product is in use.
Supplemental Safety & Health Data:	None

Transportation Data

DOT PSN Code:	<i>ZZZ</i>
DOT Proper Shipping Name:	Environmentally Hazardous Substance, Liquid, N.O.S.
DOT Class:	9
DOT ID Number:	Not regulated by this mode of transportation
DOT Label:	9
IMO PSN Code:	<i>ZZZ</i>
IMO Proper Shipping Name:	Environmentally Hazardous Substance, Liquid, N.O.S.
IMO Regulations Page Number:	
IMO UN Number:	UN3082
IMO UN Class:	Environmentally Hazardous Substance, Liquid, N.O.S.
IMO Subsidiary Risk Label:	9
IATA PSN Code:	<i>ZZZ</i>
IATA UN ID Number:	UN3082
IATA Proper Shipping Name:	Environmentally Hazardous Substances, Liquid, N.O.S.
IATA UN Class:	9
IATA Label:	Hazard
AFI PSN Code:	<i>ZZZ</i>
AFI Proper Shipping Name:	Environmentally Hazardous Substance, Liquid, N.O.S.

AFI Class: 9
 AFI ID Number
 AFI Label: Hazard
 AFI Basic Pac Ref:

Label Data

Label Required: YES
 MFR Label Number: R11LAB.WPD
 Label Status: F
 Common Name: R11, CFC 11, TRICHLOROFLUOROMETHANE
 Signal Word: WARNING
 Acute Health Hazard-Moderate X
 Contact Hazard-Moderate: X
 Fire Hazard-None: X
 Reactivity Hazard-None: X
 Special Hazard Precautions: Vapor is heavier than air and can cause suffocation by suffocation by replacing available oxygen for breathing. Store and use with adequate ventilation. High concentrations of vapor may cause dizziness, narcosis, cardiac irregularities, unconsciousness or death. Liquid can cause frostbite on skin. Remove victim to fresh air. Give oxygen/CPR if needed. Do not give Epinephrine or similar drugs. Eye irritant flush with water for 15 minutes. Contact Doctor in all cases.
 Protect Eye, Skin, Respiratory: Y
 Label Name: RemTec International
 Label Street: 1100 Haskins Road
 Label City: Bowling Green, OH 43402 USA

"Information contained herein is provided without warranty. RemTec International will not be liable for any damage which may result from the use or reliance on any information contained herein."

Sara 313 Supplier Notification

This product contains the following EPCRA Section 313 chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40CFR372).

CAS Number: 75-69-4
 Trichlorofluoromethane: 100% by weight

OSHA requires that you must provide copies of this MSDS to all of your customers who purchase this product.