

MATERIAL SAFETY DATA SHEET

CHLORODIFLUOROMETHANE, TECHNICAL

NSN:

Manufacturer's CAGE:

Part No. Indicator: 100-R22

Part Number/Trade Name: REFRIGERANT GAS R-22

General Information

Item Name:	CHLORODIFLUOROMETHANE, TECHNICAL		
Company's Name:	Remtec International		
Company's Street:	1100 Haskins Road		
Company's City, State, Zip:	Bowling Green, OH 43402, USA		
Company's Emerg Ph #:	PERS-N.America 800-633-8253/International 801-629-0667		
Company's Info Ph #:	419-867-8990	FAX	419-867-3279
Date MSDS Prepared:	12/2006	Safety Data Review Date:	12/01/2009
MSDS Preparer's Name:	RemTec		
MSDS Serial Number:	MSDSR22R		
Specification Number:	BB-F-1421		
Spec Type, Grade, Class:	TYPE 22		
Hazard Characteristic Code:			
Unit Of Issue:	Pound	Type Of Container:	CYLINDER
Unit Of Issue Container Qty:	1-1000 pounds	Net Unit Weight:	30-500 LBS

Ingredients/Identity Information

Proprietary:	NO
Ingredient:	CHLORODIFLUOROMETHANE
Ingredient Sequence Number:	01
Percent:	100
NIOSH (RTECS) Number:	PA6390000
CAS Number:	75-45-6
OSHA PEL:	1000 PPM
ACGIH TLV:	1000 PPM; 9293
Other Recommended Limit:	NONE RECOMMENDED

Physical/Chemical Characteristics

Formulation:	CHClF ₂	Molecular Weight:	86.47
Appearance And Odor:	CLEAR, COLORLESS, LIQUIFIED GAS WITH FAINT ETHER-LIKE ODOR		
Boiling Point:	-41F, -41C		
Melting Point:	UNKNOWN		
Vapor Pressure (MM Hg/70 F):	7033 MM HG	Critical Pressure (psia):	721.9
Vapor Density (Air=1):	2.9(AIR=1)	Liquid Density at 77°F:	74.53
Specific Gravity:	1.17 (WATER=1)		
Decomposition Temperature:	UNKNOWN	Critical Temperature (F):	204.8
Evaporation Rate And Ref:	UNKNOWN		
Solubility In Water:	SLIGHT		
Percent Volatiles By Volume:	100	Autoignition Temperature (F):	1170
Corrosion Rate (IPY):	UNKNOWN		

Fire and Explosion Hazard Data

Flash Point: NONFLAMMABLE
 Extinguishing Media: Use Water Fog, Carbon Dioxide, Foam, or Dry Chemical
 Special Fire Fighting Proc: Wear fire fighting protective equipment and full faced self contained breathing apparatus. Cool fire exposed containers with water spray.
 Unusual Fire And Expl Hazards: Combustion or heat of fire may produce hazardous decomposition products and vapors.

Reactivity Data

Stability: YES
 Cond To Avoid (Stability): High heat, open flames and other sources of ignition.
 Materials To Avoid: Strong alkalis, alkali earth metals, finely divided metal powders, and strong oxidizing agents.
 Hazardous Decomp Products: Thermal decomposition products include hydrogen fluoride, hydrogen chloride, chlorine, carbon monoxide, & carbon dioxide
 Hazardous Poly Occur: NO
 Conditions To Avoid (Poly): NONE

Health Hazard Data

LD50-LC50 Mixture: 2 HR LC50 (RAT) = 200,000 PPM
 Route Of Entry Inhalation: YES Skin: NO Ingestion: NO
 Health Haz 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. chronic: none
 Carcinogenicity - NTP: NO
 Carcinogenicity - IARC: NO
 Carcinogenicity - OSHA: NO
 Explanation Carcinogenicity: NOT LISTED AS CARCINOGEN BY NTP, IARC, OR OSHA.
 Signs/Symptoms Of Overexp: Dizziness, shortness of breath, narcosis, cardiac irregularities, unconsciousness, death, frostbite.
 Medical Cond Aggravated By Exp: Individuals with heart (cardiovascular) or respiratory disorders may be at an increased risk from exposure.
 Emergency/First Aid Proc: 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 Mat. Released/Spill: Keep upwind. Ventilate area-especially low places remove open flames and heating elements. Disperse gas with floor level forced air.
 Neutralizing Agent: None
 Waste Disposal Method: Recycle or reclaim if possible. Reclaimed material may be incinerated but toxic and corrosive combustion products (hf & hcl) must be handled appropriately. Dispose of in accordance with local, state and federal regulations.
 Precautions-Handling/Storing: Store in tightly closed containers. Keep containers out of direct sunlight. Keep away from sources of heat and open ignition sources.
 Other Precautions: Avoid eye, and skin contact. Do not breath vapor mists or sprays. Avoid hot surfaces, open flames, cigarette smoking.

Control Measures

Respiratory Protection:	If engineering controls fail, non-routine use or emergency occurs; use NIOSH/MSHA approved respirator or supplied air respirator or SCBA, as required. use in accordance with 29 CFR 1901.134.
Ventilation:	Use adequate mechanical ventilation.
Protective Gloves:	Rubber
Eye Protection:	SAFETY GLASSES/CHEMICAL SPLASH GOGGLES
Other Protective Equipment:	CLOTHING TO PREVENT CONTACT IF LIQUID.
Work Hygienic Practices:	Wash hands after use and before eating, drinking, or smoking.
Suppl. Safety & Health Data:	R22 is not mutagenic in mammalian test systems but is mutagenic to bacteria (ames test). Workplace air should be monitored to assure that TLV are not exceeded.

Transportation Data

DOT Proper Shipping Name:	CHLORODIFLUOROMETHANE or REFRIGERANT GAS R22
DOT Class:	2.2
DOT ID Number:	UN1018
DOT Label:	NONFLAMMABLE GAS
IMO PSN Code:	EDB
IMO Proper Shipping Name:	CHLORODIFLUOROMETHANE or REFRIGERANT GAS R22
IMO Regulations Page Number:	2118
IMO UN Number:	1018
IMO UN Class:	2.2
IMO Subsidiary Risk Label:	
IATA PSN Code:	GHQ
IATA UN ID Number:	1018
IATA Proper Shipping Name:	CHLORODIFLUOROMETHANE or REFRIGERANT GAS R22
IATA UN Class:	2.2
IATA Label:	NON-FLAMMABLE GAS
AFI PSN Code:	GHQ
AFI Prop. Shipping Name:	CHLORODIFLUOROMETHANE or REFRIGERANT GAS R22
AFI Class:	2.2
AFI ID Number:	UN1018
AFI Label:	NON-FLAMMABLE GAS
AFI Basic Pac Ref:	A6.3,A6.5
N.O.S. Shipping Name:	CHLORODIFLUOROMETANE or REFRIGERANT GAS R22

Label Data

Label Required:	YES
Chronic Hazard:	NO
Signal Word:	CAUTION!
Acute Health Hazard-Slight:	X
Contact Hazard-Slight:	X
Fire Hazard-None:	X
Reactivity Hazard-None:	X
Special Hazard Precautions:	Contact with vapor may cause eye/skin irritation. Contact with liquid may cause frostbite. Inhalation of high concentrations may cause asphyxiation; may cause sensitivity to adrenalin, producing heart effects. Store in tightly

closed containers. Keep containers out of direct sunlight. Keep away from sources of heat and open ignition sources. First aid: eyes: flush with plenty of water for at least 15 minutes. Get medical attention.

SKIN: Get medical attention. If frostbitten, warm skin slowly with water.

INHALATION: Move to fresh air. Give artificial respiration if breathing stopped. Give oxygen if breathing difficult. Get medical attention.

Protect Eye:	Y
Protect Skin:	Y
Protect Respiratory:	Y
Label Name:	RemTec International
Label Street:	1100 Haskins Road
Label City, State, Zip, Country:	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: 75-45-6

Chlorodifluoromethane: 100% by weight

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