

America Part # 12143

MATERIAL SAFETY DATA SHEET

BROMOCHLORODIFLUOROMETHANE

NSN:

Manufacturer's CAGE:

Part No. Indicator:

Part Number/Trade Name: **HALON 1211**

General Information

Item Name:	BROMOCHLORODIFLUOROMETHANE		
Company's Name:	RemTec International		
Company's Street:	436 N Enterprise Dr		
Company's City, State, Zip:	Bowling Green, OH 43402, USA		
Company's Emerg Ph #:	Chemtel-N.America 800-255-3924/International 813-248-0585		
Company's Info Ph #:	419-867-8990	FAX	419-867-7449
Date MSDS Prepared:	5/22/00	Safety Data Review Date:	
MSDS Preparer's Name:	Patricia A Burns		
MSDS Serial Number:	MSDS1211.doc		
Specification Number:			
Spec Type, Grade, Class:			
Hazard Characteristic Code:			
Unit Of Issue:	Pound	Type Of Container:	CYLINDER
Unit Of Issue Container Qty:	1-1000 pounds	Net Unit Weight:	100-1000 LBS

Ingredients/Identity Information

Proprietary:	NO
Ingredient:	BROMOCHLORODIFLUOROMETHANE
Ingredient Sequence Number:	01
Percent:	100
NIOSH (RTECS) Number:	
CAS Number:	353-59-3
OSHA PEL:	N/A
ACGIH TLV:	N/A
Other Recommended Limit:	NONE RECOMMENDED

Physical/Chemical Characteristics

Formulation:	CF ₂ ClBr	Molecular Weight:	165.3
Appearance And Odor:	CLEAR, COLORLESS, LIQUIFIED GAS WITH SWEET ODOR		
Boiling Point:	26F, -3.3C		
Melting Point:	UNKNOWN		
Vapor Pressure (MM Hg/70 F):	1897	Critical Pressure (psia):	594.9
Vapor Density (Air=1):	5.8 @ 68F	Vapor Density (kg/m3):	5.7
Specific Gravity:	1.83 (WATER=1)	Critical Temperature (C):	153.8
Decomposition Temperature:	N/A	Auto-Ignition Temp:	N/A
Evaporation Rate And Ref:	UNKNOWN		
Solubility In Water:	Insoluble		
Percent Volatiles by Volume:	100		
Corrosion Rate (IPY):	UNKNOWN		

Fire and Explosion Hazard Data

Flash Point: NONFLAMMABLE
 Extinguishing Media: HALON 1211 is a Fire Extinguishing Media
 Special Fire Fighting Proc: Wear Fire Fighting Protective Equipment and Full Faced Self-Contained Breathing Apparatus. Cool fire exposed containers with water spray or fog
 Unusual Fire And Expl Hazards: Combustion or heat of fire over 900F may produce hazardous decomposition products and vapors. Cylinders are equipped with relief devices but may still rupture under fire conditions.

Reactivity Data

Stability: YES
 Cond To Avoid (Stability): NONE
 Materials To Avoid: STRONG ALKALIS, ALKALI EARTH METALS, FIRES OF METAL HYDRIDES, AND MATERIAL CONTAINING OWN OXYGEN
 Hazardous Decomp Products: Thermal decomposition products include Hydrogen Fluoride, Hydrogen Bromide, Bromine, Carbonyl Fluoride and Carbonyl Bromide.
 Hazardous Poly Occur: NO
 Conditions To Avoid (Poly): NONE

Health Hazard Data

LD50-LC50 Mixture: 4 HR LC50 (RAT) = 131,600 PPM
 Route Of Entry: Inhalation: YES Skin: NO Ingestion: NO
 Health Haz Acute And Chronic: The Underwriters Laboratories classification of comparative life hazard of Halon 1211 is Group 5. A concentration above 2 percent can produce dizziness, impaired coordination, and cardiac arrest. The compound is reported to be Mutagenic in the Ames test, negative in the Mouse Lymphoma Assay and negative in the Mouse Micro Nucleus Assay. No Reproductive effects were reported in a study with rats. Smoking in areas where this chemical is released can cause the formation of toxic and irritating Halogens and Halogen Acids, which could be inhaled with the smoke. Avoid exposure to product and decomposition products when wearing contact lenses, clouding of lenses may occur.
 Carcinogenicity - NTP: NO
 Carcinogenicity - IARC: NO
 Carcinogenicity - OSHA: NO
 Explanation Carcinogenicity: NOT LISTED AS CARCINOGEN BY NTP, IARC, OR OSHA.
 Signs/Symptoms Of Overexp: EXPOSURE FOR MORE THAN A FEW MINUTES ABOVE 2L PERCENT (8.5 LBS/1000 FT3) CAN PRODUCE DIZZINESS, IMPAIRED COORDINATION AND CARDIAC EFFECT
 Medical Cond Aggravated By Exp: Cardiac problems may be aggravated by overexposure.
 Emergency/First Aid Proc: Inhalation: Remove person to fresh air. If not breathing, give Artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
 Skin Contact: FLUSH WITH WATER, GET MEDICAL ATTENTION

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, IF EXPOSED TO CONCENTRATIONS GREATER THAN 2%. 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.

Transportation Data

DOT Proper Shipping Name: BROMOCHLORODIFLUOROMETHANE

DOT Class: 2.2

DOT ID Number: UN 1974

DOT Label: NONFLAMMABLE GAS

IMO PSN Code:

IMO Proper Shipping Name: BROMOCHLORODIFLUOROMETHANE

IMO Regulations Page Number:

IMO UN Number: UN 1974

IMO UN Class: 2.2

IMO Subsidiary Risk Label:

IATA PSN Code:

IATA UN ID Number: UN 1974

IATA Proper Shipping Name: BROMOCHLORODIFLUOROMETHANE

IATA UN Class: 2.2

IATA Label: NON-FLAMMABLE GAS

AFI PSN Code:

AFI Prop. Shipping Name: BROMOCHLORODIFLUOROMETHANE

AFI Class: 2.2

AFI ID Number: UN 1974

AFI Label: NON-FLAMMABLE GAS

AFI Basic Pac Ref: 6-6,6-8

N.O.S. Shipping Name: BROMOCHLORODIFLUOROMETHANE

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 is difficult. Get medical attention.
Protect Eye:	Y
Protect Skin:	Y
Protect Respiratory:	Y
Label Name:	REMTEC INTERNATIONAL INC.
Label Street:	436 N ENTERPRISE DR
Label City, State, Zip, Country:	BOWLING GREEN, OH, 43402, USA
Label Emergency Number:	CHEMTEL 813-979-0626

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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.