

MATERIAL SAFETY DATA SHEET**BROMOCHLORODIFLUOROMETHANE**

NSN:

Manufacturer's CAGE: 4LMC6
 Part No. Indicator: 100-1211
 Part Number/Trade Name: HALON 1211

General Information

Item Name: CHLORODIFLUOROBROMOMETHANE
 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: 05/03/07 Safety Data Revised Date: 12/01/2009
 MSDS Preparer's Name: RemTec
 MSDS Serial Number: MSDS1211
 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: Chlorodifluorobromomethane
 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:	CHLORODIFLUOROBROMOMETHANE
DOT Class:	2.2
DOT ID Number:	UN 1974
DOT Label:	NONFLAMMABLE GAS
IMO PSN Code:	
IMO Proper Shipping Name:	CHLORODIFLUOROBROMOMETHANE
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:	CHLORODIFLUOROBROMOMETHANE
IATA UN Class:	2.2
IATA Label:	NON-FLAMMABLE GAS
AFI Prop. Shipping Name:	CHLORODIFLUOROBROMOMETHANE
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:	CHLORODIFLUOROBROMOMETHANE

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
Label Street:	1100 Haskins Road
Label City, State, Zip, Country:	Bowling Green, OH, 43402, USA

"Information contained herein is provided without warranty. RemTec 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).

Gas is also known as Bromochlorodifluoromethane

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