



Halon 1301 MATERIAL SAFETY DATA SHEET

Trade Name: H3R, INC.	Emergency Telephone No.: CHEMTREC (800) 424-9300 or (703) 527-3887
Prepared By: Safety and Health Department	Date Prepared: January 12, 1996

SECTION 1 - IDENTITY

Common Name: (used on label) (Trade Name and Synonyms)	Halon 1301, Freon FE 1301	CAS No.:	75-63-8
Chemical Name:	Bromotrifluoromethane	Chemical Family:	Halogenated Methane
Formula:	CBrF ₃		

SECTION 2 - INGREDIENTS

PART A - HAZARDOUS INGREDIENTS				
Principal Hazardous Component(s) (chemical and common name(s)):	Wt. %	CAS No.	ACGIH TLV	Acute Toxicity Data
Bromotrifluoromethane Chemical Listed Under SARA Title III - Section 313	> 99	75-63-8	1,000 ppm	ihl (rat) 211.2 mg/L 4 hrs.
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <p>WARNING: Contains bromotrifluoromethane (Halon 1301), a substance which harms the public health and environment by destroying ozone in the upper atmosphere.</p> </div>				
PART B - OTHER INGREDIENTS				
Other Component(s) (chemical and common name(s)):	Wt. %	CAS No.	ACGIH TLV	Acute Toxicity Data
None	N/A	N/A		N/A

SECTION 3 - PHYSICAL AND CHEMICAL CHARACTERISTICS (Fire and Explosion Data)

Boiling Point:	Ɖ72.0 ȳF	Specific Gravity (H ₂ O = 1):	1.57	Vapor Pressure (mm Hg):	199.0 psi @70 ȳ
Percent Volatile by Volume (%):	100	Vapor Density (Air = 1):	5.2	Evaporation Rate (= 1):	N/A Gas at room temperature
Solubility in Water:	Negligible	Reactivity in Water:	Unreactive		
Appearance and Odor:	Colorless gas, sweet odor.				
Flash Point:	None	Flammable Limits in Air % by Volume:	N/A	Extinguisher Media:	N/A
Auto-Ignition Temperature:	N/A				
Special Fire Fighting Procedures:	THIS IS A FIRE EXTINGUISHING AGENT. Use water to cool fire-exposed cylinders or other containers. Self-contained breathing apparatus with full facepiece and protective clothing when re-entering unventilated fire areas where product has been used.				
Unusual Fire and Explosion Hazards:	Containers are equipped with pressure and temperature relief devices, but rupture may occur under fire conditions and toxic decomposition by-products may be formed if used in fires over 900 ȳF.				

SECTION 4 - PHYSICAL HAZARDS

Stability:	Unstable <input type="checkbox"/> Stable <input checked="" type="checkbox"/>	Conditions to Avoid:	Decomposes under fire conditions above 900 ȳF
Incompatibility (Materials to Avoid):	Active metals and fires involving metal hydrides.		
Hazardous Decomposition Products:	Thermal decomposition at temperatures above 900 ȳF forming hydrogen fluoride and hydrogen bromides. These by-products have a sharp irritating odor. They are dangerous even in low concentrations, and in sufficient concentrations can result in personal injury or death.		
Hazardous Polymerization:	May Occur <input type="checkbox"/> Will Not Occur <input checked="" type="checkbox"/>	Conditions to Avoid:	N/A
NOTE: As used in Ansul extinguishers or cylinders, Halon 1301 is a gas compressed under pressure up to 360 psi at 70 ȳ F.			



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SECTION 5 - HEALTH HAZARDS

Threshold Limit Value:	1000 ppm is the OSHA PEL and the ACGIH TLV. NOTE: The effects of exposure to Halon 1301 should disappear quickly upon removal from exposure. LC ₅₀ rats greater than 800,000 ppm (v/v)4 hr.		
Routes of Entry: Eye Contact:	The liquid form of this material can produce chilling sensations and discomfort.		
Skin Contact:	Evaporation of liquid from the skin can produce chilling sensations. Frostbite can occur.		
Inhalation:	Vapor is heavier than air and can cause suffocation by reducing oxygen available for breathing. Breathing very high concentrations of vapor can cause lightheadedness, giddiness, shortness of breath, and may lead to narcosis, cardiac irregularities, unconsciousness or even death.		
Ingestion:	Ingestion is not likely to occur since this material is gas at room temperature.		
Signs and Symptoms:	Acute Overexposure:	Dizziness, impaired coordination, reduced mental acuity, and cardiac effects can occur. Unconsciousness or even death in high concentrations with longer exposures.	
	Chronic Overexposure:	None known when occupational exposures are below the TLV.	
Medical Conditions Generally Aggravated by Exposure:	Cardiac problems.		
Chemical Listed as Carcinogen or Potential:	National Toxicology Program:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	I.A.R.C. Monographs: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
		OSHA: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

SECTION 6 - EMERGENCY AND FIRST AID PROCEDURES

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 minutes while holding lids open. If redness, itching or a burning sensation develops, get Medical attention. Treat for frostbite if necessary.
Skin Contact:	Wash the material off the skin with copious amounts of soap and water for at least 15 minutes. If redness, itching, or burning occurs, get Medical attention. Treat for frostbite if necessary.
Inhalation:	Remove victim to fresh air. If cough or other respiratory symptoms occur, consult Medical personnel. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Consult Medical personnel.
Ingestion:	Ingestion is not likely to occur since this material is gas at room temperature.
NOTE TO PHYSICIAN:	Product is an asphyxiant and can induce cardiac muscle sensitization to circulating epinephrine-like compounds. Do NOT give adrenalin or similar sympathomimetic drugs. Do NOT allow victim to exercise until 24 hours following specific exposures. Freeze burns of mucosal tissue can develop following specific exposures.

SECTION 7 - SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type):	Not normally necessary if controls are adequate. For high concentrations exceeding 10%, or if exposure is prolonged, use positive pressure air-supplied respirator.		
Ventilation:	Local Exhaust:	Recommended to control exposures. See mechanical.	Mechanical (General): Recommended in low areas or indoors where vapors may collect.
Protective Gloves:	Plastic if working with liquid.	Eye Protection:	Chemical goggles recommended. Full faceshield in addition if splashing of liquid form is possible.
Other Protective Clothing or Equipment:	Eye wash and safety showers are good safety practice in work areas when working with liquefied product.		

SECTION 8 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Precautions to be Taken in Handling and Storage:	Store as a liquefied compressed gas in DOT approved pressure vessels away from high temperatures. If cylinder is not connected to a system, it must be safety capped to protect against actuation of valve and release of agent.
Other Precautions:	Note incompatibility information in Section 4.
Steps to be Taken in Case Material is Released or Spilled:	Evacuate area; ventilate to outside atmosphere. Cool or remove hot, metal surfaces or source of non-extinguished flames.
Waste Disposal Methods:	Dispose of in compliance with local, state, and federal regulations.

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM RATINGS

HAZARD INDEX:	1	HEALTH
4 Severe Hazard	0	FLAMMABILITY
3 Serious Hazard	0	REACTIVITY
2 Moderate Hazard		
1 Slight Hazard		
0 Minimal Hazard		

N/A = Not Applicable

NDA = No Data Available