

**Safety Data Sheet**  
**Bromotrifluoromethane (Halon 1301, R13B1)**

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**Section 1: Identification**

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Product Name: Halon 1301, R13B1  
Chemical Name: Bromotrifluoromethane  
CAS No.: 75-63-8  
Chemical Formula: CBrF3  
EINECS Number: 200-887-6

The intended or recommended use of this preparation is as a FIRE EXTINGUISHING AGENT

Supplier: Wesco HMB Inc.  
Address: 108 Liberty Street, Metuchen NJ 08840  
Phone: 732-452-0001  
Internet/Home Page: <http://www.ushalonbank.com>  
Date of Issue: June, 2015

**Emergency Telephone:**

**Professional Emergency Resource Services**  
**Contract No: 8991**  
**Domestic/Canada: 1-800-633-8253**  
**International: 801-629-0667**

**Section 2: Hazards Identification**

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**HAZARD CLASSIFICATION:** Gas under pressure, Liquefied gas  
Skin irritation, Category 3  
Eye irritation, Category 1

**SIGNAL WORD:** **WARNING**

**HAZARD STATEMENT:** Liquid and gas under pressure.  
Overheating and overpressurizing may cause gas release or violent cylinder bursting.  
Simple asphyxiant.



**PRECAUTIONARY STATEMENTS:** Keep container tightly closed in a cool/well-ventilated place.  
Keep away from heat/sparks/open flame. – No smoking.  
Do not allow liquid or vapors to come into contact with skin or eyes.  
Wear protective gloves and eye/face protection.  
Do not breathe mist/vapors.  
Use only in a well-ventilated area.  
Avoid release to the environment.

**OTHER HAZARDS:** May decompose on contact with flames or extremely hot metal surfaces to produce toxic and corrosive products.  
Vapor reduces oxygen available for breathing and is heavier than air.

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Harmful if inhaled and may cause heart irregularities, unconsciousness, or death.  
Liquid contact with eyes or skin may cause frostbite

**ASHRAE STANDARD 34 SAFETY RATING:** A1

#### Section 3: Composition/Information on Ingredients

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Ingredient Name:	Bromotrifluoromethane.
Chemical Formula:	CBrF <sub>3</sub> .
CAS No.:	75-63-8.
EINECS Number:	200-887-6.
Concentration, Wt %:	>99 %.

#### Section 4: First Aid Measures

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**SKIN:** Flush exposed skin with lukewarm water (not hot), or use other means to warm skin slowly. Get medical attention if frostbitten by liquid or if irritation persists.

**EYES:** Immediately flush with large amounts of water for at least 15 minutes. Get medical attention if irritation persists.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**INGESTION:** Not applicable - product is a gas at ambient temperatures.

**ADVICE TO PHYSICIAN:** Because of the possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, should be used with special caution and only in situations of emergency life support. Treatment of overexposure should be directed at the control of symptoms and the clinical conditions.

#### Section 5: Fire-Fighting Measures

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This preparation is an extinguishing media.  
Use water to cool fire-exposed cylinders or other containers.  
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 °C.  
There are NO extinguishing media which must not be used for safety reasons.  
Self-contained breathing apparatus with full facepiece and protective clothing when re-entering unventilated fire areas where product has been used.

#### Section 6: Accidental Release Measures

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If the release is caused by an open valve and it is safe for operator to close, do so. If possible to transfer the remaining gas in the cylinder in a safe manner to a separate tank, do so. If the release cannot be isolated or closed and it is a significant amount, allow the gas to release in place or safely move cylinder to a safe area. Evacuate area in the event of a significant release in an enclosed area. Keep upwind. Ventilate area, especially low places. Remove open flames and heating elements. Disperse gas with floor level recd air. NEVER direct water jet on liquid.

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#### Section 7: Handling and Storage

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##### Handling

Care should be taken in handling all chemical substances and preparations.  
See incompatibility information in Heading 10.

##### 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.  
See incompatibility information in Heading 10.  
Relative to the environment, this material has an ozone depletion potential and a global warming potential.  
See Heading 12.

##### Specific use

The intended or recommended use of this preparation is as a FIRE EXTINGUISHING AGENT.

#### Section 8: Exposure Controls/Personal Protection

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##### Exposure limit values

Limit Values for Exposure:

ACGIH TLV (US):	1,000 ppm, 6,090 mg/m <sup>3</sup> .
MAK (DE):	6,100 mg/m <sup>3</sup> .
Short Term Exposure, 60 min., 3 times:	12,200 mg/m <sup>3</sup> .
VME (France):	6,100 mg/m <sup>3</sup> .

##### Exposure controls

###### Occupational exposure controls

Eye wash and safety showers are good safety practice in work areas when working with liquids.

###### Respiratory protection

Mechanical ventilation is recommended in low areas or indoors where vapors may collect.

Local exhaust is recommended for most exposures.

Not normally necessary if controls are adequate. For high concentrations exceeding 10%, or if exposure is prolonged, use positive pressure air supplied respirator.

###### Hand protection

Use plastic gloves when handling the liquid.

###### Eye protection

Chemical goggles recommended as mechanical barrier.

Full faceshield is addition if splashing of liquid form is possible.

###### Skin protection

Standard work clothes should provide all protection which is necessary.

###### Environmental exposure controls

Relative to the environment, this material has an ozone depletion potential and a global warming potential.  
See Heading 12

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#### Section 9: Physical and Chemical Properties

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##### General information

Appearance: Colorless gas.  
Odor: Sweet.

##### Important health, safety, and environmental information

pH: Not applicable.  
Boiling point/boiling range:  $-57.8\text{ }^{\circ}\text{C}$  ( $-72.0\text{ }^{\circ}\text{F}$ ) @ 1013 hPa.  
Flash point: None.  
Flammability (solid/gas): Not flammable.  
Explosive properties: Not explosive.  
Oxidizing properties: Not an oxidizer.  
Vapor Pressure: 199.0 psi @ 70  $^{\circ}\text{F}$ ;  
14,500 hPa @ 20  $^{\circ}\text{C}$ .  
28,300 hPa @ 50  $^{\circ}\text{C}$ .  
  
Relative Density (Water = 1): 1.57.  
Solubility:  
– Water solubility: Negligible.  
– Fat solubility: Not determined.  
Partition coefficient, n-octanol/water  
(Log Pow): 1.86 @ 25  $^{\circ}\text{C}$ .  
Viscosity: Not determined.  
Vapor density (Air = 1): 5.2.  
Evaporation rate: Not applicable.

##### Other information

Auto-ignition temperature: Does not ignite.

#### Section 10: Stability and Reactivity

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##### Conditions to avoid

Can be decomposed under fire conditions above 900  $^{\circ}\text{F}$ .

##### Materials to avoid

Active metals and fires involving metal hydrides.

##### Hazardous decomposition products

Normally stable.  
Hazardous polymerization will NOT occur.  
Combustion or decomposition products above 900  $^{\circ}\text{F}$  include hydrogen bromide and hydrogen fluoride. 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.

#### Section 11: Toxicological Information

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**ROUTES OF EXPOSURE:** Inhalation, Skin contact, Eye contact

**ACUTE EFFECTS OF EXPOSURE:** Frostbite from skin contact with liquid.

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High vapor concentrations are irritating to the eyes and respiratory tract and may result in central nervous system effects such as headache, dizziness, drowsiness and, in severe exposure, loss of consciousness and death. The dense vapor of this material may reduce the available oxygen for breathing, and prolonged exposure to an oxygen-deficient atmosphere may be fatal. Inhalation may cause an increase in the sensitivity of the heart to adrenaline, which could result in irregular or rapid heartbeats. Medical conditions aggravated by exposure include heart disease or compromised heart function.

**CHRONIC EFFECTS OF EXPOSURE:** None known.

**ACUTE TOXICITY:** LC50 (rat – 1 hr.)  $\geq$  700,000 ppm

**CHRONIC TOXICITY:** None known.

**DESCRIPTION OF SYMPTOMS:** Inhalation of high concentration may lead to unconsciousness and possible death. Effects of overexposure by inhalation may include non specific discomfort, such as nausea, headache, or weakness, or temporary central nervous system depression with effects such as dizziness, headache, confusion, loss of coordination, and loss of consciousness. Higher exposures by inhalation may cause temporary alteration of the heart's electrical activity with irregular pulse, palpitations, or inadequate circulation. Individuals with pre-existing diseases of the central nervous or cardiovascular system may have increased susceptibility to the toxicity of excessive exposure.

**CARCINOGENICITY:** Not listed as a carcinogen by NTP, IARC, or OSHA

#### Section 12: Ecological Information

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**Ecotoxicity:** Not determined.

**Mobility:** The adsorption Koc for bromotrifluoromethane can be estimated to be approximately 244.8. This indicates that the compound will be moderately mobile in soil.

**Persistence and degradability:** Photodegradation: >50 % after 44 years.

**Bioaccumulative potential:** Not determined.

**Other adverse effects:**

Ozone depletion potential:	Expected to destroy ozone in the upper atmosphere.
Photochemical ozone creation potential:	None.
Global warming potential:	May contribute to global warming.

#### Section 13: Disposal Information

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**RCRA:** Unused product is not considered to be a RCRA hazardous waste.

**DISPOSAL CONSIDERATIONS:** Recover, reclaim or recycle when practical. Dispose of in accordance with federal, state and local regulations. Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations. Contact a certified reclaimer for recovery/reclamation of this product.

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**Section 14: Transport Information**

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**U.S. DEPARTMENT OF TRANSPORTATION**  
**UN NUMBER:** UN1009  
**UN PROPER SHIPPING NAME:** Bromotrifluoromethane  
Refrigerant gas R-13B1  
**US DOT HAZARD CLASS:** 2.2, Non-Flammable Gas  
**PACKING GROUP:** Not Applicable

**Section 15: Regulatory Information**

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**U.S. FEDERAL REGULATIONS**

**TSCA (TOXIC SUBSTANCE CONTROL ACT):** All components of this product are listed on the TSCA Inventory list.

**CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT) and SARA (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):**

No "Reportable Quantities" (RQs) or "Threshold Planning Quantities" (TPQs) exist for any of the ingredients in this product.

**Any spill or release resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center (800-424-8802) and to your local Emergency Planning Committee.**

**SECTION 311 HAZARD CLASS:** Immediate (Acute) Health  
Sudden Release of Pressure

**SECTION 313 TOXIC CHEMICALS:** This product contains a substance which is defined as a toxic chemical under, and subject to the reporting requirements of, Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 (SARA 313) and 40 CFR part 372. See Section 3 Composition/Information on Ingredients for listed chemical.

**ADDITIONAL REGULATORY INFORMATION:**

**WARNING: Do not vent** to the atmosphere. To comply with provisions of the U.S. Clean Air Act, any residual must be recovered. **Contains Trifluorobromomethane**, an ozone depleting substance which can harm public health and the environment by destroying ozone in the upper atmosphere. Destruction of the ozone layer can lead to increased ultraviolet radiation which, with excess exposure to sunlight, can lead to an increase in skin cancer and eye cataracts.

**FOREIGN INVENTORY STATUS:**

EU-EINECS: # 2008876

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**Section 16: Other Information**

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THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT, BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. ANSUL SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT.