

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATIONS AND OF THE COMPANY UNDERTAKING**

<b>Product Name</b>	Halon 1301 (Fire Extinguishing Agent)
<b>Other Trade Names</b>	Bromotrifluoromethane
<b>Product Description</b>	Fire Extinguishing Agent
<b>Manufacturer/Supplier</b>	Fenwal Protection Systems
<b>Address</b>	400 Main Street Ashland, MA 01721 USA
<b>Phone Number</b>	(508) 881-2000
<b>Chemtrec Number</b>	(800) 424-9300
<b>(for emergencies only)</b>	(703) 527-3887 (International)
<b>Revision Date:</b>	February 9, 2012
<b>MSDS Date:</b>	February 9, 2009

*Safety Data Sheet according to EC directive 2001/59/EC and OSHA's Hazcom Standard (29 CFR 1910.1200)*

**2. HAZARDS IDENTIFICATION**

<b>EU Main Hazards</b> Non Flammable Gas
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**Routes of Entry**

Eye contact - Inhalation - Skin contact

**Carcinogenic Status**

Not considered carcinogenic by NTP, IARC, and OSHA.

**Target Organs**

Respiratory System - Skin - Eye - Cardiovascular System - Central Nervous System

**Health Effects - Eyes**

Direct contact with the cold gas or liquid can cause freezing of exposed tissues, with pain, redness, burns and corneal damage.

**Health Effects - Skin**

Direct contact with the cold gas or liquid can cause freezing of exposed tissues.

**Health Effects - Ingestion**

Ingestion is not a possible route of exposure.

**Health Effects - Inhalation**

Exposure to vapor at high concentrations have the following effects: - light headedness - dizziness - difficulty with breathing - drowsiness - nausea - mental confusion - increased blood pressure - increased respiratory rate - loss of consciousness. Exposure at high concentrations may cause temporary alteration of the heart's electrical activity with irregular pulse, palpitations or inadequate circulation.

Individuals with preexisting diseases of the cardiovascular system or nervous system may have increased susceptibility from excessive exposures.



## MATERIAL SAFETY DATA SHEET

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#### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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Component Name	CAS#/Codes	Concentration	R Phrases	EU Classification
Methane, bromotrifluoro-	75-63-8 EC#200-887-6	>99.9	None	Non Flammable Gas

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#### 4. FIRST AID MEASURES

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##### Eyes

Immediately flood the eye with plenty of warm water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

##### Skin

Flush with water. Obtain medical attention if frostbite or blistering occurs or redness persists.

##### Ingestion

Ingestion is not considered a potential route of exposure.

##### Inhalation

Remove from exposure. If there is difficulty in breathing, give oxygen. Obtain medical attention immediately.

##### Advice to Physicians

In case of frostbite, place the frostbitten part in warm water. If warm water is not available or impractical to use, wrap the affected parts gently in blankets. DO NOT USE HOT WATER.

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#### 5. FIRE - FIGHTING MEASURES

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##### Extinguishing Media

Halon 1301 is used as an extinguishing agent and therefore is not a problem when trying to control a blaze. Use extinguishing agent appropriate to other materials involved. Keep containers and surroundings cool with water spray as containers may rupture or burst in the heat of a fire.

##### Unusual Fire and Explosion Hazards

Containers may explode in heat of fire. Predominant decomposition products are hydrogen fluoride and hydrogen bromide in fire situations. Products are irritant and potentially toxic if fire extinguishment is delayed.

##### Protective Equipment for Fire-Fighting

Wear full protective clothing and self-contained breathing apparatus as appropriate for specific fire conditions.

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#### 6. ACCIDENTAL RELEASE MEASURES

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Wear full protective clothing and self-contained breathing apparatus. Remove leaking cylinder to a safe place. Ventilate the area. Leaks inside confined spaces may cause suffocation, as vapors may displace air, and should not be entered without a self-contained breathing apparatus.

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#### 7. HANDLING AND STORAGE

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Cylinders should be properly stored and secured to prevent falling or being knocked over. Do not drag, slide or roll cylinders. Do not drop cylinders or permit them to strike against each other. Never apply flame or localized heat directly to any part of the cylinder. Store away from sources of heat or ignition. Storage area should be: - cool - dry - well ventilated - under cover - out of direct sunlight

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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**Occupational Exposure Standards****Methane, bromotrifluoro-**

ACGIH TLV: 1000ppm TWA

OSHA PEL: 1000ppm (6100mg/m<sup>3</sup>) TWA**Engineering Control Measures**

Use with adequate ventilation. There should be local procedures for the selection, training, inspection and maintenance of this equipment. When used in large volumes or odor becomes apparent, use local exhaust ventilation.

**Respiratory Protection**

Not normally required under conditions of use as a portable fire extinguisher. In oxygen deficient atmospheres, use a self contained breathing apparatus, as an air purifying respirator will not provide protection.

**Hand Protection**

Wear rubber gloves. Avoid contact with skin.

**Eye Protection**

Chemical goggles or safety glasses with side shields. Avoid contact with eyes.

**Body Protection**

Normal work wear.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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<b>Physical State</b>	Liquefied gas under pressure
<b>Color</b>	Colorless
<b>Odor</b>	Slight ether
<b>Specific Gravity</b>	Not available
<b>Boiling Range/Point (°C/F)</b>	-58°C/ - 72 °F
<b>Flash Point (PMCC) (°C/F)</b>	Not Flammable
<b>Solubility in Water</b>	0.03 wt% @ 77 °F
<b>Vapor Density (Air = 1)</b>	5.14
<b>Vapor Pressure</b>	235 psia @ 77°F
<b>Gas Density</b>	Not available
<b>Evaporation Rate</b>	Not available

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**10. STABILITY AND REACTIVITY**

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**Stability**

Stable under normal conditions.

**Conditions to Avoid**

- Heat - High temperatures - Exposure to direct sunlight

**Materials to Avoid**

- alkali or alkaline earth metals - powdered metals (ex. aluminum, zinc, etc.)

**Hazardous Polymerization**

Will not occur.

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**10. STABILITY AND REACTIVITY**

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**Hazardous Decomposition Products**

- hydrogen fluoride – hydrogen bromide – free bromine – carbonyl halides

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**11. TOXICOLOGICAL INFORMATION**

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**Acute Toxicity**

Inhalation 1-hour LC50(rat) >770,000 ppm

**Chronic Toxicity/Carcinogenicity**

This product is not expected to cause long term adverse health effects.

**Genotoxicity**

This product is not expected to cause any mutagenic effects. Tests have shown that this material does not cause genetic damage in bacterial cell cultures.

**Reproductive/Developmental Toxicity**

This product is not expected to cause adverse reproductive effects. Tests in animals demonstrate no developmental toxicity.

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**12. ECOLOGICAL INFORMATION**

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**Mobility**

No data available.

**Persistence/Degradability**

No data available.

**Bio-accumulation**

No data available.

**Ecotoxicity**

No data available.

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**13. DISPOSAL CONSIDERATIONS**

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Dispose of container in accordance with all applicable local and national regulations. Do not cut, puncture or weld on or near to the container. If spilled, contents will vaporize to the atmosphere.

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**14. TRANSPORT INFORMATION**

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<b>DOT CFR 172.101 Data</b>	Bromotrifluoromethane, 2.2, UN1009
<b>UN Proper Shipping Name</b>	Bromotrifluoromethane or Refrigerant Gas, R 13B1
<b>UN Class</b>	(2.2) Non-Flammable Gas
<b>UN Number</b>	UN1009
<b>UN Packaging Group</b>	Not applicable

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**15. REGULATORY INFORMATION**

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**EU Label Information**

Classification and labelling have been performed according to EU directives 67/548/EEC and 99/45/EC including amendments(2001/60/EC and 2006/8/EC)

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**15. REGULATORY INFORMATION**

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**EU Hazard Symbol and Indication of Danger.**

Non Flammable Gas

**R phrases**

None

**S phrases**

None

**US REGULATIONS (Federal, State) and INTERNATIONAL CHEMICAL REGISTRATION LAWS****TSCA Listing**

This product contains ingredients that are listed on or exempt from listing on the EPA Toxic Substance Control Act Chemical Substance Inventory.

**EINECS Listing**

All ingredients in this product are listed on the European Inventory of Existing Commercial Chemical Substances (EINECS) or the European List of New Chemical Substances (ELINCS) or are exempt from listing.

**DSL/NDSL (Canadian) Listing**

All ingredients in this product are listed on the Domestic Substance List (DSL) or the Non-Domestic Substance List (NDSL) or are exempt from listing.

**WHMIS Classification**

A

This product was classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations and the MSDS contains all the information required by these regulations.

**MA Right To Know Law**

All components have been checked for inclusion on the Massachusetts Substance List (MSL). Those components present at or above the de minimis concentration include: - Methane, bromotrifluoro- (75-63-8)

**PA Right To Know Law**

This product contains the following chemicals found on the Pennsylvania Hazardous Substance List: - none Methane, bromotrifluoro- (75-63-8)

**NJ Right To Know Law**

This product contains the following chemicals found on the NJ Right To Know Hazardous Substance List: - none Methane, bromotrifluoro- (75-63-8)

**California Proposition 65**

This product does not contain materials which the State of California has found to cause cancer, birth defects or other reproductive harm.

**SARA Title III Sect. 302 (EHS)**

This product does not contain any chemicals subject to SARA Title III Section 302.

**SARA Title III Sect. 304**

This product does not contain any chemicals subject to SARA Title III Section 304.

**SARA Title III Sect. 311/312 Categorization**

- Immediate (Acute) Health Hazard - Pressure Hazard

**SARA Title III Sect. 313**

This product contains a chemical which is listed in Section 313 at or above de minimis concentrations: Methane, bromotrifluoro- (75-63-8)



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### 16. OTHER INFORMATION

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#### **NFPA Ratings**

NFPA Code for Health - 1  
NFPA Code for Flammability - 0  
NFPA Code for Reactivity - 0  
NFPA Code for Special Hazards - None

#### **HMIS Ratings**

HMIS Code for Health - 1  
HMIS Code for Flammability - 0  
HMIS Code for Reactivity - 0  
HMIS Code for Personal Protection - See Section 8

#### **Abbreviations**

N/A: Denotes no applicable information found or available  
CAS#: Chemical Abstracts Service Number  
ACGIH: American Conference of Governmental Industrial Hygienists  
OSHA: Occupational Safety and Health Administration  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
STEL: Short Term Exposure Limit  
NTP: National Toxicology Program  
IARC: International Agency for Research on Cancer  
R: Risk  
S: Safety

**Prepared By:** EnviroNet LLC.

The information contained herein is based on data believed to be accurate. However, no representation, warranty, or guarantee is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for its own particular use. Fenwal Protection Systems assumes no responsibility for personal injury or property damage resulting from use, handling or from contact with this product.

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