SAFETY DATA SHEET

Section 1. Identification of the substance/mixture and of the company/undertaking

Product identifier

Product Name: Halon 1301 with Nitrogen

Relevant identified uses of the substance or mixture and uses advised against

Recommended Use(s): Aircraft Fire Extinguishers

Details of the supplier of the safety data sheet

Manufacturer: Meggitt Control Systems

1785 Voyager Ave
Simi Valley California 93063
United States

Url: http://www.meggittsafety.com/

Emergency telephone number

Emergency Contact: **Emergency:** 1-800-535-5053
Infotrac contact # 84268
General: 805-584-4100

Section 2. Hazards identification

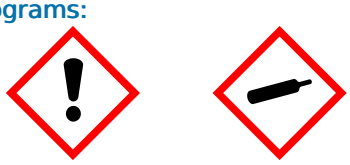
Classification of the substance or mixture

GHS Classification for mixture:

Simple Asphyxiation
Hazardous to the ozone layer - Category 1
Gasses under pressure - Category Compressed gas

Label elements

Pictograms:



Signal Words:

Warning

Hazard Statements:

Contains gas under pressure; may explode if heated .
Harms public health and the environment by destroying ozone in the upper atmosphere .

Precautionary Statements:

Storage

Store in a well-ventilated place.
Protect from sunlight.

Disposal

Refer to manufacturer or supplier for information on recovery or recycling.

Other hazards

No available data for this section.

Section 3. Composition/information on ingredients

Substances

No available data for this section.

Mixtures

Identifiers	Ingredients	Percentage	Classification
75-63-8	Bromotrifluromethane	<90%	Press. Gas, Simple Asphyxiation, Ozone 1
7727-37-9	Nitrogen	<10%	

Section 4. First-Aid Measures

Description of First Aid Measures

In the event of splashes or contact with eyes

Seek medical attention. If frostbite or freezing occurs, immediately flush with plenty of lukewarm water (105-115°F; 41-46°C) for at least 15 minutes. Contact with the liquid of this product will cause frostbite to the eyes. Immediately flush with clean, low-pressure water for several minutes.

In the event of splashes or contact with skin

Contact with the liquid of this product will cause frostbite to the skin. Seek medical advice.

In the event of ingestion

Not a likely route of entry. In case of ingestion of large quantities immediately take the exposed person to hospital.

In the event of inhalation

Do not leave the exposed person unattended. If after inhalation you feel unwell, seek medical advice. If necessary, provide additional oxygen once breathing is restored if trained to do so. If spontaneous vomiting occurs, lean the exposed person forward to reduce the risk of aspiration. Loosen tight clothing such as a collar, tie, belt, or waistband. Remove person to fresh air and keep at rest in a position comfortable for breathing.

Most important symptoms and effects, both acute and delayed

Symptoms include: Nausea. Vomiting. Irregular heartbeat. Symptoms of drunkenness. Disorientation. Bluish skin. Suffocation. Convulsions. Possible death.

Asphyxiant: The vapors of this product reduce oxygen available for breathing and are heavier than air. Inhalation of the vapors of the product causes central nervous system depression and affects the cardiovascular system.

Indication of any immediate medical attention and special treatment needed

No available data for this section.

Section 5. Firefighting Measures

Extinguishing media

Suitable Extinguishing Media

The product is not flammable or combustible.

Unsuitable Extinguishing Media

No available data for this section.

Special hazards arising from the substance or mixture

Specific Hazards Arising from Combustion of Products

No available data for this section.

Combustion Products

Hydrogen fluorides. Hydrogen bromides. Free bromine and carbonyl halides.

Advice for firefighters

Protective Measures for Fire-Fighting

Wear full protective clothing. Wear self-contained breathing apparatus.

Special Protective Actions for Fire-Fighters

No available data for this section.

Other Information for Fire Fighters

No available data for this section.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Wear self-contained breathing apparatus or airline.

Environmental precautions

All release to the environment should be avoided as this material has an ozone depletion potential and a global warming potential. Run-off water may be contaminated by other materials and should be contained to prevent possible environmental damage.

Methods and material for containment and cleaning up

Evacuate the area promptly. Stop leak if safe to do so. Ventilate the contaminated area.

Reference to other sections

No available data for this section.

Section 7. Handling and Storage

Precautions for safe handling

Avoid being exposed to gas / mist / dust / fume / vapor /spray / particles. Avoid contact with eyes. Check container for defect or leakage before handling. Do not handle in a confined space. Do not handle until all safety precautions have been read and understood. Handle in accordance with all current regulations and standards. Handle in accordance with good industrial hygiene and safety practice. Wearing contact lenses is not recommended when handling this gas.

Conditions for safe storage, including any incompatibilities

Conditions for Safe Storage

Respect the occupational health and safety standards. Store only in well-ventilated areas.

Suitable Packaging

No available data for this section.

Incompatible Materials

No available data for this section.

Specific end use(s)

No available data for this section.

Section 8. Exposure Controls / Personal Protection

Control parameters

Control Parameters / Limits for Product

International exposure limits: The following countries have TWA values of 1000 ppm. Austria. Belgium. Denmark. Finland. France. ermany. Iceland. The Netherlands. Switzerland. Turkey.

Control Parameters / Limits for Component

Bromotrifluromethane

Country Specific Concentrations	Austria. Belgium. Denmark. Finland. France. Germany. Iceland. The Netherlands. Korea. Mexico. Australia. New Zealand. Peru. The Philippines. Switzerland. Turkey. All have TWA's of 1000 ppm. Russia: STEL 3000 mg/m³.

Bromotrifluromethane

ACGIH

TWA	1000 ppm (8 hours) 6090 mg/m³ (8 hours)

NIOSH

REL	1000 ppm (10 hours) 6100 mg/m³ (10 hours)

OSHA

PEL	1000 ppm (8 hours) 6100 mg/m³ (8 hours)

Exposure controls

Engineering Measures

Provide adequate general and local exhaust ventilation. If appropriate, install automatic monitoring equipment to detect the level of oxygen.

Respiratory Protection

Up to 25 000 ppm: Any SAR operated in a continuous-flow mode.

Up to 40 000 ppm: Any SAR that has a tight-fitting facepiece or SCBA.

Up to 10 000 ppm: Any Supplied-Air Respirator (SAR).

Certified self-contained breathing apparatus must be available in case of emergency. Respiratory protection is required if the concentrations exceed the TLV. Use respiratory protection if oxygen level is below 19.5%.

Eye/Face Protection

Wear safety goggles.

Skin and Body Protection

Safety shoes are recommended when handling cylinders.

Hand Protection

Compatible Gloves Material: PVC. PVA.

Wear impermeable gloves.

Hygiene Measures

Use in accordance with good hygiene and safety practice.

Environmental exposure controls

No available data for this section.

Section 9. Physical and chemical properties

Information on basic physical and chemical properties

Physical State	Compressed gas
Appearance	Clear , Colorless
Odor	Slight ethereal
Odor threshold	Not available
pH	7
Melting point	Not available
Boiling point	-57.778°C / -72°F
Flash Point	Not available
Evaporation rate	Not available
Flammability	Not available
Flammability limit	Not available
Vapor pressure	235 psi Conditions of Measurement: Temperature: 25°C / 77°F
Vapor density	heavier than air 5.14 times heavier
Relative density	1.5 multiplier w/r/t air Conditions of Measurement: Temperature: 25°C / 77°F Pressure: 101.3kPa
Solubility	0.03 g/100g
Solubility in other solvents	Not available
Partition coefficient	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Freezing point	Not available
Percent volatiles	100 %wt

Other Information

No available data for this section.

Section 10. Chemical Stability & Reactivity Information

Reactivity

Chemical stability: This product is stable under ambient condition. Product will decompose above 537°C - 1000°F.

Chemical Stability

This product is stable under ambient condition.

Possibility of Hazardous Reactions

Hazardous polymerization will not occur under normal conditions.

Conditions to Avoid

No available data for this section.

Incompatible Materials

Liquid contact with alkali and alkaline earth metals (powdered aluminum, zinc, beryllium, etc.).

Hazardous Decomposition Products

Hydrogen fluorides. Hydrogen bromides. Free bromine and carbonyl halides.

Section 11. Toxicological Information

Information on toxicological effects

Toxicological Information for Product

Asphyxiant: The vapors of this product reduce oxygen available for breathing. Inhalation of the vapors of the produc causes ventral nervous system depression and affects cardiovascular system. Symptoms include the following. Headaches. Ringing in ears. Dizziness. Drowsiness. Unconsciousness. Nausea. Vomiting. Depression of all the senses. Skin may have a blue appearance. Exposure to high concentrations may result in death.

Toxicological Information for Component

Bromotrifluromethane

LC50 Inhalation - Vapor	430 g/m³ (4 hours).
LC50 Inhalation - Gas	Greater than 77000 ppmV (1 hours).

Irritation/Corrosion Information for Product

No available data for this section.

Irritation/Corrosion Information for Component

No available data for this section.

Section 12. Ecological Information

Toxicity

Ecotoxicity Values for Product

No available data for this section.

Ecotoxicity Values for Component

No available data for this section.

Persistence and degradability

No available data for this section.

Bioaccumulative potential

Bioaccumulative Potential for Product

No available data for this section.

Bioaccumulative Potential for Component

Bromotrifluromethane

BCF: 5.4.
Potential: low.
LogPow: 1.86.

Mobility in soil

No available data for this section.

Results of PBT and vPvB assessment

No available data for this section.

Other adverse effects

No available data for this section.

Section 13. Disposal Considerations

Waste treatment methods

Waste Disposal Regulation(s) / Operation

EU Waste Codes: 16 05 04.

Disposal, treatment, or recycling of industrial waste must comply with applicable regulations to preserve the environment. Users need to pay attention to the possible existence of regional or national regulations regarding disposal.

Waste Treatment Methods

Contact the supplier for recovery of unused Halon.

Section 14. Transportation Information

	ADR	IMDG	IATA	DOT
UN number	1044	1044	1044	1044
UN proper shipping name	Fire Extinguishers	Fire Extinguishers	Fire Extinguishers	Fire Extinguishers
Transport hazard class(es)	2.2 Nonflammable Gas	2.2 Nonflammable Gas	2.2 Nonflammable Gas	2.2 Nonflammable Gas
Packing group	No available data for this section.	No available data for this section.	No available data for this section.	No available data for this section.
Environmental hazards	No available data for this section.	No available data for this section.	No available data for this section.	No available data for this section.
Special precautions for user	No available data for this section.			
Transport in bulk according to Annex II of Marpol and the IBC Code	No available data for this section.			
Other	No available data for this section.			

Section 15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Safety, Health and Environmental Regulations for Product

No available data for this section.

Safety, Health and Environmental Regulations for Component

Bromotrifluromethane

EC 3093/94 and EC2037/2000:	Banned in general use, Aerospace exclusion.
Canadian HPA:	1% reportable.
Pressure:	Yes.
Chronic Health:	Yes.
Acute Health:	Yes.
SARA 313:	1.0% de minimis concentration.
Canada DLS:	Listed.
RTRCS No:	PA5425000.
California prop 65:	Listed.
Right to know:	Massachusetts.
	New Jersey.
	Pennsylvania.
	Rhode Island.
	Minnesota.
TSCA:	Listed.

Chemical safety assessment

No available data for this section.

Section 16. Other Information

Other Information

No available data for this section.

Disclaimer

The information herein is presented in good faith and believed to be accurate as of the effective date given. However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws

Glossary

No available data for this section.