



HTL/KIN-TECH DIVISION

Material Safety Data Sheet

RECYCLED HALON 1301

SECTION I. IDENTIFICATION

Recycler's/Manufacturer's Name PACIFIC SCIENTIFIC
Address 1800 Highland Ave
Duarte, California 91010

Emergency Phone Number

Chemical Name

Synonyms

Trifluorobromomethane

Halon 1301

Bromotrifluoromethane

Trifluoromethyl Bromide

CAS Number

75-63-8

Chemical Family

Halogenated Hydrocarbon

Chemical Formula

CF₃Br

Molecular Weight

148.9

Issued

November 2, 2004

Supersedes

November 2, 1995

SECTION II. INFORMATION ON COMPONENTS/INGREDIENTS

Components	CAS Number	Percentage
------------	------------	------------

Trifluorobromomethane	75-63-8	100 %
-----------------------	---------	-------

SECTION III. PHYSICAL DATA

Boiling Point -57.8 ~C (-71 .95 °F)

Vapor Pressure at 25 °C (77 °F) 235 psia

Vapor Density (Air = 1) 5.14 at 25 cc (77 °F)

Volatility, Vol. % 100 %

Solubility in H₂O 0.03 % by weight at 25 °C (77 °F)

Appearance/Odor Colorless gas with slight odor

Specific Gravity (H₂O = 1) 1.54 at 25 °C (77 °F)

SECTION IV. FIRE AND EXPLOSION HAZARD DATA**Flash Point** Non-flammable

Flammability Limits Not applicable
LEL Not applicable
UEL Not applicable

Extinguishing Media Halon 1301 is a fire extinguishing agent. Use water to cool fire-exposed cylinders as they might rupture when exposed to heat.

Special Fire Fighting Precautions Self-contained breathing apparatus and protective clothing should be worn when re-entering unventilated fire areas where the product has been used.

Unusual Fire and Explosion Hazards When Halon 1301 is discharged onto a fire, it decomposes above 1560 °F (850 °C) releasing hydrogen fluoride, hydrogen bromide, bromine, and small amounts of carbonyl fluoride, and carbonyl bromide. These decomposition products, although harmful if inhaled, are easily detected; only a few parts per million in air cause an unpleasant acrid odor which acts as a warning to personnel.

SECTION V. REACTIVITY

Chemical Stability Stable
Conditions to Avoid None known
Incompatibly/Materials to Avoid Active metals, fires of metal hydrides, and materials containing own oxygen
Decomposition Products Hydrogen fluoride, hydrogen bromide
Hazardous Polymerization Will not occur
Polymerization Conditions to Avoid None

SECTION VI. SPILLS AND LEAK PROCEDURES

Accidental Leaks or Spills Evacuate area. Wear protective gear when turning off gas source. Before re-entry, ventilate area, especially low or enclosed places where heavy vapors might collect.

Waste Disposal Considerations Dispose of in accordance with all Local, State, and Federal regulations. In some regions, discharge for non-fire related events is prohibited. Unused product should be returned for recycling to Pacific Scientific, Duarte, California.

SECTION VII. HEALTH HAZARD DATA

Route of Exposure	Inhalation, skin contact
Potential Health Effects	INHALATION: Overexposure may cause central nervous system depression such as dizziness, confusion, incoordination, drowsiness or unconsciousness. This material may cause heightened sensitivity to circulating epinephrine (adrenaline) compounds resulting in irregular heart beats and sometimes death. SKIN/EYE CONTACT: Evaporation of Halon 1301 on the skin/eye may cause a chilling sensation or even frostbite. Significant skin permeation and subsequent systemic toxicity appears unlikely.
Toxicity Data	inhalation rat ALC (15 minute); 83.2% Canine Cardiac NOAEL = 5.0% Canine Cardiac LOAELt 7.5%
Carcinogenicity	Not listed by ARC, OSHA or ACGIH as a carcinogen
Exposure Limits	OSHA PEL: 1000 ppm, 6100 mg/n, ³ ACGIH TLV: 1000 ppm, 6100 mg/n, ³ NIOSH IDLH: 50,000 ppm
Overexposure Effects	Central nervous system depression and/or heart irregularities
Emergency/First Aid Procedures	INHALATION: Remove to fresh air immediately; keep person calm. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call physician. Administration of epinephrine (adrenaline) is contraindicated in the treatment of overexposure to Halon 1301. SKIN CONTACT: Immediately flush area with large amount of lukewarm, not hot, water. If persistent redness, itching, or burning sensation exists, seek medical attention. EYE CONTACT: Immediately flush affected eye(s) with lukewarm, not hot, water for at least 15 minutes. Consult a physician.

SECTION VIII. SPECIAL PROTECTION/CONTROL MEASURES

Respiratory Protection	Not normally needed if controls are adequate. If needed, use MSHA/NIOSH approved respirator for organic vapors. For high concentrations, confined areas, and oxygen-deficient atmospheres, wear air-supplied mask or self-contained breathing apparatus.
------------------------	--

NOAEL = No Observable Adverse Effect Level

~ LOAEL = Lowest Observable Adverse Effect Level

Ventilation**Ventilate low-lying areas, such as sumps or pits**

where dense vapors may collect. Use local exhaust to control exposures.

Protective Gloves

Lined butyl gloves

Eye Protection

Chemical splash goggles when handling liquid.

Other Protective Equipment

None required

Handling and Storage Procedures

Store cylinders in cool place, below 125 °F
Avoid cylinder damage. Limit exposure to vapors.**SECTION IX. SHIPPING/TRANSPORTATION INFORMATION**

DOT Shipping Name

Bromotrifluoromethane, Non-flammable Gas

Hazard Class

Non-flammable gas, 2.2

DOT/IMO Label

Non-flammable gas, **2.2**

UN Number

1009

Reportable Quantity (RQ)

Not established

Packaging Size

Packaged to customer specification in compressed gas cylinders.

SECTION X. ADDITIONAL INFORMATION**SARA/TITLE III HAZARD CATEGORIES AND LISTS** This chemical is subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and 40 CFR Part 372

Chronic Health

No

Acute Health

Yes

Fire Hazard

No

Pressure Hazard

Yes

Reactivity Hazard

No

Extremely Hazardous Substance

No

CERCLA Hazardous Substance

No

Toxic Chemicals

No

MSDS Preparer

Nolan Kim

Phone Number of Preparer

626-359-9317

The above information is believed to be correct and the most current information available. It represents the best judgment for proper use and handling of this product under normal conditions. Any use of the product which is not in conformance with this MSDS or which involves using the product in combination with any other product or any other process is the responsibility of the user.