

MATERIAL SAFETY DATA SHEET **000032**

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DATE PREPARED: 1/15/87

SUPERCEDES: 11/ 1/85

RESPONSIBLE PERSONS: D. EMERICH OR D. ELLISON
 TELEPHONE: (205)655-3271

IDENTIFICATION

PRODUCT NAME: HALON 1211

SYNONYMS: Bromochlorodifluoromethane, BCF

HAZARDOUS INGREDIENTS

MATERIAL	CAS NO.	OSHA PEL	ACGIH TLV
Bromochlorodifluoromethane	353-59-3	Unknown	Not listed

OTHER INGREDIENTS

MATERIAL	CAS NO.
None	

PHYSICAL AND CHEMICAL CHARACTERISTICS

BOILING POINT (°F): 26	SPECIFIC GRAVITY (H ₂ O=1): 1.83 (liquid)	VAPOR PRESSURE (MM HG): 778 @ 60°F
PERCENT VOLATILE (%): 100	VAPOR DENSITY (AIR = 1): 5.7	EVAPORATION RATE: High
SOLUBILITY IN WATER: 0	REACTIVITY IN WATER: NA	MELTING POINT (°F): NA
pH: no data	APPEARANCE & ODOR: Colorless gas and liquid with very faint, sweet odor.	
FLASH POINT(°F): None	AUTO IGNITION TEMPERATURE(°F): NA	FLAMMABLE LIMITS IN AIR BY VOL.: NA
EXTINGUISHER MEDIA: None. This material is an extinguishing agent.		
SPECIAL FIRE FIGHTING PROCEDURES: 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: When Halon 1211 is discharged onto a fire, it decomposes above 900°F, releasing bromide ions, the extinguishing agent. Halogen compounds, such as halogen acids, are also formed. These by-products, although harmful if inhaled, are easily detected. Only a few PPM create an unpleasant, acrid odor which serves as a warning to the user. After the extinguisher is discharged, the area should be vacated until ventilation clears the atmosphere.		

PHYSICAL HAZARDS

STABILITY: Stable	CONDITIONS TO AVOID: Decomposes under fire conditions
INCOMPATIBILITY (MATERIALS TO AVOID): Active metals such as powdered alumina and magnesium and fires of metal hydrides	
HAZARDOUS DECOMPOSITION PRODUCTS: Decomposes above 900°F to give free halogens, halogen acid and small amounts of carbonyl halides.	
HAZARDOUS POLYMERIZATION: Will not occur	
CONDITIONS TO AVOID: NA	

HEALTH EFFECTS AND FIRST AID

EFFECTS OF ACUTE OVEREXPOSURE FOR PRODUCT:

- EYES: The liquid form of this material can produce chilling sensations and discomfort.
- SKIN: Evaporation of liquid from the skin can produce chilling sensations.
- BREATHING: Exposures for more than a few minutes above 4% (171 lbs/1000 cu. ft. air) concentration can produce dizziness, impaired coordination, and cardiac effects.
- SWALLOWING: Not likely to occur since this material is a gas at room temperature.

FIRST AID:

- IF IN EYES: Flush with water for 15 minutes. If redness, itching, or a burning sensation develops, have eyes examined and treated by medical personnel.
- IF ON SKIN: Wash with soap and water. If redness, itching, or a burning sensation develops, seek medical attention.
- IF BREATHED: Remove victim to fresh air. If cough or other respiratory symptoms develop, consult medical personnel.
- IF SWALLOWED: Give 1 or 2 glasses of warm water to drink and seek medical attention.

PRIMARY ROUTES OF ENTRY:

Eyes, Skin Contact, Breathing

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

In susceptible individuals, cardiac sensitization to circulating epinephrine compounds can result in potentially fatal heart arrhythmias.

EFFECTS OF CHRONIC OVEREXPOSURE FOR PRODUCT:

Unknown

PRODUCT LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN:

NATIONAL TOXICOLOGY PROGRAM	[] YES [X] NO	IARC MONOGRAPHS	[] YES [X] NO	OSHA	[] YES [X] NO
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CONTROL MEASURES AND PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION (TYPE):

Not normally needed. If needed, use MSHA/NIOSH approved respirator for organic vapors.

VENTILATION: GENERAL AREA: Recommended
LOCAL EXHAUST: Recommended

SKIN PROTECTION:

Impervious Gloves for Liquid Exposure

EYE PROTECTION:

Safety Glasses

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

Eye wash station and safety shower in work area when working with liquified product.

WORK/HYGIENE PRACTICES:

Use good personal hygiene and good housekeeping practices.

SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Store in a cool area with good ventilation. Keep vapors away from high temperature surfaces to avoid toxic and corrosive decomposition products.

OTHER PRECAUTIONS:

Enforce "No Smoking" rules in areas of use.

STEPS TO BE TAKEN IN CASE PRODUCT IS RELEASED OR SPILLED:

Ventilate spill area and recover any liquid.

HMIS RATINGS:

HEALTH 2
FLAMMABILITY 0
REACTIVITY 0

HMIS HAZARD INDEX	
MINIMAL	0
SLIGHT	1
MODERATE	2
SERIOUS	3
SEVERE	4