

FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

Material Safety Data Sheet (MSDS)

MSDS #: 131.00

Revision Date: March 15, 2001

Section 1 — Chemical Product and Company Identification

Bromine and Bromine Water

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Section 2 — Composition, Information on Ingredients

Bromine and Bromine Water: Bromine (7726-95-6) 0.5%, Water (7732-18-5) 99.5%

CAS#: 7726-95-6

Section 3 — Hazards Identification

Bromine: Dark, reddish-brown, fuming liquid.

Bromine Water: Reddish-brown liquid; strong pungent odor; chlorine-like. Bromine may separate.

Highly toxic by ingestion and inhalation. Severe skin irritant, may cause skin burns. Can cause blindness. Strong oxidizer, heat of reaction may ignite combustibles on contact. Will react with water or steam to produce toxic and corrosive fumes. Very, very seriously hazardous substance.

FLINN AT-A-GLANCE

Health-3
Flammability-0
Reactivity-3
Exposure-3
Storage-2

0 is low hazard, 3 is high hazard

Section 4 — First Aid Measures

Call a physician, seek medical attention for further treatment, observation and support after first aid.

Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.

Eye: Immediately flush with fresh water for 15 minutes.

External: Wash continuously with fresh water for 15 minutes.

Internal: Give 1 to 2 cups of water or milk, followed by a gastric antacid, such as milk of magnesia. Do not induce vomiting. Call a physician or poison control at once.

Section 5 — Fire Fighting Measures

Non-combustible liquid. Will react with water or steam to produce toxic and corrosive fumes.

Strong oxidizer, heat of reaction may ignite combustibles on contact.

Fire Fighting Instructions: Use triclass, dry chemical fire extinguisher. Firefighters should wear PPE and SCBA with full facepiece operated in positive pressure mode.

NFPA CODE

H-3
F-0
R-0
OX

Section 6 — Accidental Release Measures

Restrict unprotected personnel from area. Remove all ignition sources and ventilate area. Contain spill with sand and absorbent material; cover spill with a reducing material such as hypo (sodium thiosulfate); deposit in sealed bag or container. See Sections 8 and 13 for further information.

Section 7 — Handling and Storage

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Store in a cool dry place. Store in a Flinn Chem-Saf bag inside a Flinn Saf-Stor can. Use and dispense in a hood.

Section 8 — Exposure Controls, Personal Protection

Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits. Always wear a NIOSH-approved respirator with proper cartridges or a positive pressure, air-supplied respirator when handling this material in emergency situations (spill or fire). Exposure guidelines: TWA 0.1 PPM, STEL 0.3 PPM (OSHA, NIOSH)

Section 9 — Physical and Chemical Properties

Bromine: Dark, reddish-brown, fuming liquid.
Bromine Water: Reddish-brown liquid; strong pungent odor; chlorine-like.
Solubility: Most common organic solvents. Bromine water contains (approx.) 1.4 grams of bromine per 100 ml of water.

Formula: Br
Formula Weight: 59.5 C
Specific Gravity: 3.1
Boiling Point: 175 mm (20 C)
Vapor Density: 7.14

Section 10 — Stability and Reactivity

Very strong oxidizing agent; heat of reaction may ignite combustible materials on contact. Avoid contact with all other laboratory chemicals. Will react with water or steam to produce toxic and corrosive fumes.
Shelf life: Good, if stored properly.

Section 11 — Toxicological Information

Acute effects: Highly toxic, harmful vapor, lachrymator, corrosive.
Chronic effects: N.A.
Target organs: Respiratory system, eyes & central nervous

ORL-RAT LD50: 2600 mg/kg
IHL-RAT LC50: 750 ppm/9m
SKN-RBT LD50: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

Section 12 — Ecological Information

Data not yet available.

Section 13 — Disposal Considerations

Please consult with state and local regulations.
Flinn Suggested Disposal Method #12a is one option.

Section 14 — Transport Information

Shipping Name: Bromine
Hazard Class: 8, Corrosive, Poison
UN Number: UN1744

N/A = Not applicable

Section 15 — Regulatory Information

TSCA-listed, EINECS-listed (231-778-1), RCRA code D002, D003.

Section 16 — Other Information

Consult your copy of the Flinn Scientific Catalog/Reference Manual for additional information about laboratory chemicals. This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. Flinn Scientific Inc. assumes no legal responsibility for use or reliance upon this data.

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