

FLINN SCIENTIFIC, INC.

Material Safety Data Sheet (MSDS)

MSDS #: 131.10

Revision Date: November 24, 2010

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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 (7726-95-6) 1-2%, water (7732-18-5) 98-99%

CAS#: None established

SECTION 3 — HAZARDS IDENTIFICATION

Reddish-brown aqueous solution. Pungent chlorine-like odor. Bromine may separate. Highly toxic by ingestion and inhalation. Severe skin irritant; may cause burns and irreversible eye damage. Strong oxidizer, heat of reaction may ignite combustibles on contact. Will react with water or steam to produce toxic and corrosive fumes. Extremely hazardous substance.

FLINN AT-A-GLANCE

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

0 is low hazard, 3 is high hazard

SECTION 4 — FIRST AID MEASURES

Call a physician and 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 at least 15 minutes.
External: Wash continuously with fresh water for at least 15 minutes.
Internal: Do NOT induce vomiting. Rinse mouth. Give large quantities of water for dilution. Call a physician or poison control at once.

SECTION 5 — FIRE FIGHTING MEASURES

Noncombustible 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 a triclass, dry chemical fire extinguisher. Firefighters should wear PPE and SCBA with full facepiece operated in positive pressure mode.
NFPA Code is for bromine.

NFPA CODE

H-3
F-0
R-0
OX

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Restrict unprotected personnel from the area. Remove all ignition sources and ventilate area. Contain the spill with sand or other inert absorbent material and cover spill with a reducing material such as hypo (sodium thiosulfate). Deposit in a 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: PEL 0.1 ppm, STEL 0.3 ppm (OSHA, NIOSH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Bromine Water: Reddish-brown liquid; pungent chlorine-like odor.
Solubility: Bromine water contains (approx.) 1.4 grams of bromine per 100 mL of water.

Formula: Br₂

Formula Weight: not established

Boiling Point: not established

Specific Gravity: not established

Vapor Density: not established

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, and corrosive.

Chronic effects: N.A.

Target organs: Respiratory system, eyes & central nervous system.

ORL-RAT LD₅₀: 2600 mg/kg (for bromine)

IHL-RAT LC₅₀: 2700 mg/m³ (for bromine)

SKN-RBT LD₅₀: N.A.

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

SECTION 12 — ECOLOGICAL INFORMATION

Toxic to fish and other aquatic organisms. LC₅₀ (rainbow trout) 0.31 mg/L (24 hr). LC₅₀ (water flea) 1.07 mg/L (48 hr).

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

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**Consult your copy of the *Flinn Science Catalog/Reference Manual*
for additional information about laboratory chemicals.**