

# FLINN SCIENTIFIC, INC.

## Material Safety Data Sheet (MSDS)

MSDS #: 94.01

Revision Date: October 12, 2011

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Barium Chloride Solution (<1M)

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

0.1 M - 1 M Barium chloride solutions:  
Barium chloride (10326-27-9) 2.5-24.0% & Water (7732-18-5) 76-97.5%  
CAS#: None established

### SECTION 3 — HAZARDS IDENTIFICATION

Clear, colorless solution.  
Highly toxic by ingestion and inhalation. All soluble barium compounds are poisonous if swallowed and cause nausea, vomiting, stomach pains, and diarrhea.

#### FLINN AT-A-GLANCE

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

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 or External: Immediately flush with fresh water for at least 15 minutes.  
Internal: Induce vomiting. After vomiting, give a mixture of 1 Tbs. magnesium sulfate in one cup of water. Call a physician or poison control at once.

### SECTION 5 — FIRE FIGHTING MEASURES

Noncombustible liquid.  
When heated to decomposition, emits toxic fumes of chlorine and barium.  
**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**  
None  
established

### SECTION 6 — ACCIDENTAL RELEASE MEASURES

If liquid: restrict unprotected personnel from the area and ventilate area. Contain the spill with sand or absorbent material and 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.  
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 0.5 mg/m<sup>3</sup> (as Ba) (OSHA)

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

Clear, colorless liquid.

pH: ~5

Concentrations: 0.1M = 2.5%; 1.0M = 24%

Formula: BaCl<sub>2</sub> · 2H<sub>2</sub>O

Formula weight: 244.28

**SECTION 10 — STABILITY AND REACTIVITY**

Avoid contact with strong oxidizers.

Shelf life: Indefinite, if stored properly.

**SECTION 11 — TOXICOLOGICAL INFORMATION**

Acute effects: Highly toxic, irritant, stomach pains, vomiting, and diarrhea.

ORL-RAT LD<sub>50</sub>: 118 mg/kg

Chronic effects: N.A.

IHL-RAT LC<sub>50</sub>: N.A.

Target organs: heart, nerves, kidneys, GI system, bone marrow, spleen, and liver.

SKN-RBT LD<sub>50</sub>: 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 review all federal, state and local regulations that may apply, before proceeding.

Flinn Suggested Disposal Method #27h is one option.

**SECTION 14 — TRANSPORT INFORMATION**

Shipping name: Barium Compounds, n.o.s.

Hazard class: 6.1, keep away from foods.

UN number: UN1564

N/A = Not applicable

**SECTION 15 — REGULATORY INFORMATION**

TSCA-listed, EINECS-listed (233-788-1), RCRA D005.

**SECTION 16 — OTHER INFORMATION**

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