

Mallinckrodt

Material Safety Data

Emergency Phone Number: 314-982-5000

Mallinckrodt provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose.

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Mallinckrodt, Inc., Science Products Division, P.O. Box M, Paris, KY 40361.

BARIUM CHLORIDE

PRODUCT IDENTIFICATION:

Synonyms: Barium chloride dihydrate
Formula CAS No.: 10361-37-2 (Hydrated)
TSCA CAS No.: 10326-27-9 (Anhydrous)
Molecular Weight: 244.27
Chemical Formula: $\text{BaCl}_2 \cdot 2\text{H}_2\text{O}$
Hazardous Ingredients: Not applicable.

PRECAUTIONARY MEASURES

**DANGER! MAY BE FATAL IF SWALLOWED.
HARMFUL IF INHALED. CAUSES IRRITATION.**

Avoid contact with eyes, skin and clothing.
Avoid breathing dust.
Keep container closed.
Use with adequate ventilation.
Wash thoroughly after handling.

EMERGENCY/FIRST AID

If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes. In all cases call a physician.
SEE SECTION 5.

DOT Hazard Class: Not Regulated

SECTION 1 Physical Data

Appearance: White solid.
Odor: None.
Solubility: 36 g/100 g water @ 20°C (68°F) (anhydrous)
Boiling Point: 1560°C (2840°F)
Melting Point: 963°C (1765°F)
Specific Gravity: 3.097 (anhydrous)
Vapor Density (Air=1): No information found.
Vapor Pressure (mm Hg): No information found.
Evaporation Rate: No information found.

SECTION 2 Fire and Explosion Information

Fire:
Not considered to be a fire hazard.
Explosion:
Not considered to be an explosion hazard.
Fire Extinguishing Media:
Use any means suitable for extinguishing surrounding fire.
Special Information:
In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

SECTION 3 Reactivity Data

Stability:
Stable under ordinary conditions of use and storage.
Hazardous Decomposition Products:
Involvement in a fire can cause decomposition to toxic fumes of chlorides, barium oxide, or carbon dioxide.
Hazardous Polymerization:
Will not occur.

Incompatibilities:

Bromine trifluoride; 2-furan percarbonylic acid.

SECTION 4 Leak/Spill Disposal Information

Ventilate area of leak or spill. Clean-up personnel may require respiratory protection from dust.
Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.
Disposal: Whatever cannot be saved for reclamation may be delivered to a RCRA approved waste disposal facility.
Ensure compliance with local, state and federal regulations.

Effective Date: 08-26-85

BARIUM CHLORIDE

SECTION 5 Health Hazard Information

A. EXPOSURE / HEALTH EFFECTS

Inhalation:

Irritates the respiratory tract. May produce sore throat, coughing and labored breathing. Other symptoms may parallel ingestion.

Ingestion:

Toxic! May cause severe gastroenteritis, including abdominal pain, vomiting and diarrhea. May cause tremors, faintness, paralysis of arms and legs, and slow or irregular heartbeat. Severe cases may produce collapse and death on respiratory failure. Estimated lethal dose in humans: 1 gram.

Skin Contact:

May cause redness or pain.

Eye Contact:

May cause redness, pain or blurred vision.

Chronic Exposure:

No information found.

Aggravation of Pre-existing Conditions:

Persons with pre-existing skin disorders or impaired respiratory function may be more susceptible to the effects of the substance.

B. FIRST AID

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion:

If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person. Call physician immediately.

Skin Exposure:

Remove any contaminated clothing. Wash skin with plenty of water for at least 15 minutes. If irritation develops, get medical attention.

Eye Exposure:

Wash eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

C. TOXICITY DATA

(RTECS, 1982)

Barium chloride anhydrous): Oral rat LD50: 118 mg/kg. Reproductive effects cited.

SECTION 6 Occupational Control Measures

Airborne Exposure Limits:

-OSHA Permissible Exposure Limit (PEL):

0.5 mg/M³ ppm (TWA) as barium

-ACGIH Threshold Limit Value (TLV):

0.5 mg/M³ (TWA) as barium

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

Personal Respirators: (NIOSH Approved)

If the TLV is exceeded, a dust/mist respirator with chemical goggles may be worn, in general, up to ten times the TLV. Consult respirator supplier for limitations. Alternatively, a supplied air full facepiece respirator or airlined hood may be worn.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls to prevent skin contact.

Eye Protection:

Use chemical safety goggles. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work area.

SECTION 7 Storage and Special Information

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities.

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BARCH

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Addendum to Material Safety Data Sheet

REGULATORY STATUS

This Addendum Must Not Be Detached from the MSDS
Identifies SARA 313 substance(s)
Any copying or redistribution of the MSDS must include a copy of this addendum
 (Chem.Key: BARCH)

Hazard Categories for SARA
 Section 311/312 Reporting
 Acute Chronic Fire Pressure Reactive

 X _____

Product or Components of Product:
BARIUM CHLORIDE (10326-27-9)

SARA EHS Sect. 302	TPO (lbs.)	SARA Section 313 Chemicals Name List	Chemical Category	CERCLA Sec.103	RCRA
RO (lbs.)	No	No	Barium compound	RO (lbs.)	Sec. 261.33
No	No	No	Barium compound	No	No

SARA Section 302 EHS RO: Reportable Quantity of Extremely Hazardous Substance, listed at 40 CFR 355.

SARA Section 302 EHS TPO: Threshold Planning Quantity of Extremely Hazardous Substance. An asterisk (*) following a Threshold Planning Quantity signifies that if the material is a solid and has a particle size equal to or larger than 100 micrometers, the Threshold Planning Quantity = 10,000 LBS.

SARA Section 313 Chemicals: Toxic Substances subject to annual release reporting requirements listed at 40 CFR 372.65.

CERCLA Sec. 103: Comprehensive Environmental Response, Compensation and Liability Act (Superfund). Releases to air, land or water of these hazardous substances which exceed the Reportable Quantity (RQ) must be reported to the National Response Center, (800-424-8802); Listed at 40 CFR 302.4

RCRA: Resource Conservation and Reclamation Act. Commercial chemical product wastes designated as acute hazards and toxic under 40 CFR 261.33

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