

Mallinckrodt

Material Safety Data

Emergency Phone Number: 314-982-5000

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

BARIUM HYDROXIDE

PRODUCT IDENTIFICATION:

Synonyms: Barium hydroxide octahydrate; barium hydrate

Formula CAS No.: 12230-71-6 (Hydrate)

TSCA CAS No.: 17194-00-2 (Anhydrous)

Molecular Weight: 315.47

Chemical Formula: $\text{Ba}(\text{OH})_2 \cdot 8\text{H}_2\text{O}$

Hazardous Ingredients: Not applicable.

PRECAUTIONARY MEASURES

DANGER! CORROSIVE. MAY BE FATAL IF SWALLOWED OR INHALED.

Avoid contact with eyes, skin and clothing.

Avoid breathing dust.

Keep container closed.

Use with adequate ventilation.

Wash thoroughly after handling.

EMERGENCY/FIRST AID

In all cases call a physician immediately. If swallowed, give several glasses of water or milk to drink. Vomiting may occur spontaneously, but DO NOT INDUCE! 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.

SEE SECTION 5.

DOT Hazard Class: Poison-B

SECTION 1 Physical Data

Appearance: Colorless crystals.

Odor: Odorless.

Solubility: 5.6g/100g water @ 15°C (59°F).

Boiling Point: Loses water @ 780°C (1436°F).

Melting Point: 78°C (172°F).

Density: 2.18

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. Very Alkaline. Rapidly absorbs carbon dioxide from air, becoming completely insoluble in water.

Hazardous Decomposition Products:

No information found.

Hazardous Polymerization:

This substance does not polymerize.

Incompatibilities:

Chlorinated rubber.

SECTION 4 Leak/Spill Disposal Information

Clean-up personnel should wear protective clothing for corrosives. Collected waste may be transferred to a closed, preferably metal, container. Whatever cannot be recovered may be sent to an approved waste disposal facility. Establish arrangements for returning scrap material to supplier for reprocessing, if possible.

Ensure compliance with local, state and federal regulations.

SECTION 5 Health Hazard Information

A. EXPOSURE / HEALTH EFFECTS

Inhalation:

Inhalation of dust may cause irritation to the nose, throat, and respiratory tract. Symptoms may include sore throat, coughing, and shortness of breath. Systemic poisoning may occur in sensitive individuals with symptoms similar to those of ingestion.

Ingestion:

Corrosive to human tissue. A systemic poison. May cause ulcerations to the mucous membranes of the gastrointestinal tract, tightness in the muscles of the face and neck, vomiting, diarrhea, abdominal pain, muscular tremors, anxiety, weakness, labored breathing, cardiac irregularity, convulsions, and death from cardiac and respiratory failure. Estimated lethal dose lies between 1 to 15 grams. Death may occur within hours or up to a few days. May cause kidney damage.

Skin Contact:

Solutions may cause severe burns.

Eye Contact:

Dusts may cause eye irritation. Solutions may cause severe burns and damage.

Chronic Exposure:

No information found.

Aggravation of Pre-existing Conditions:

Persons with pre-existing skin and nervous system disorders or impaired respiratory or kidney function may be more susceptible to the effects of this 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:

Give several glasses of water or milk, if available, to drink. Vomiting may occur spontaneously, but DO NOT INDUCE! Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Exposure:

Remove any contaminated clothing. Wipe off excess from skin. Wash skin with plenty of water for at least 15 minutes. Get medical attention promptly.

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)

No LD50/LC50 information found relating to normal routes of occupational exposure.

SECTION 6 Occupational Control Measures

Airborne Exposure Limits:

-OSHA Permissible Exposure Limit (PEL):
0.5 mg(Ba)/m³.
-ACGIH Threshold Limit Value (TLV):
0.5 mg(Ba)/m³.

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 and/or full face shield where dusting or splashing of solutions is possible. 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, stored in a cool, dry, ventilated area. Protect against physical damage.

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