



BARIUM NITRATE

Material Safety Data Sheet

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Emergency Telephone Number
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Effective Date: 08-30-85

PRODUCT IDENTIFICATION:

Synonyms: Barium dinitrate; nitric acid, barium salt

Formula CAS No.: 10022-31-8

Molecular Weight: 261.34

Hazardous Ingredients:
Not applicable.

Chemical Formula: $\text{Ba}(\text{NO}_3)_2$

PRECAUTIONARY MEASURES

DANGER! STRONG OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE. MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED. CAUSES IRRITATION.

Avoid breathing dust.

Keep container closed.

Use only with adequate ventilation.

Wash thoroughly after handling.

Keep from contact with clothing and other combustible materials.

Do not store near combustible materials.

Remove and wash contaminated clothing promptly.

Avoid contact with eyes, skin and clothing.

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: Oxidizer

Physical Data

Appearance: White crystals.

Odor: Odorless.

Solubility: Freely soluble in water.

Boiling Point: Decomposes $>592^\circ\text{C}$ (1098°F)

Vapor Density (Air=1): No information found.

Melting Point: 592°C (1098°F)

Vapor Pressure (mm Hg): No information found.

Density: 3.24

Evaporation Rate: No information found.

-2-

SECTION 2

Fire and Explosion Information

Fire:

Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

Explosion:

Contact with oxidizable substances may cause extremely violent combustion.

Fire Extinguishing Media:

Use flooding amounts of water in early stages of fire. Foam, dry chemical, or carbon dioxide may also be used. Do not use water on molten material.

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.

Reactivity Data

SECTION 3

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Thermal decomposition may form oxides of nitrogen and the metal.

Hazardous Polymerization:

This substance does not polymerize.

Incompatibilities:

Magnesium plus barium peroxide plus zinc, aluminum and magnesium alloys.

Leak/Spill Disposal Information

SECTION 4

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.

Barium Nitrate

Health Hazard Information**SECTION 5****A. Exposure/Health Effects****Inhalation:**

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

Ingestion:

Toxic! May cause tightness of 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:

May cause irritation, redness, and pain.

Eye Contact:

May cause irritation, redness, and pain. Severe eye irritant in animal testing.

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:

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)

Oral rat LD50: 355 mg/kg.
Irritation Data: Skin rabbit 500 mg/24H mild.
Eye rabbit 100 mg/24H severe.

Occupational Control Measures**SECTION 6****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 protective gloves and clean body-covering clothing.

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.

Storage and Special Information**SECTION 7**

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Separate from combustibles, organic or other readily oxidizable materials. Avoid storage on wood floors.

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