

MSDS# 02440

Section 1 - Chemical Product and Company Identification

MSDS Name: Barium nitrate

Catalog Numbers: AC203150000, AC203150025, AC203150050, AC203155000, B53-500, NC9344971

Synonyms: Barium dinitrate; Nitric acid, barium salt.

Company Identification: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 201-796-7100

Emergency Number US: 201-796-7100

CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#: 10022-31-8

Chemical Name: Barium nitrate

%: 100

EINECS#: 233-020-5

Hazard Symbols:

XN O



Risk Phrases:

20/22 8

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! Strong oxidizer. Contact with other material may cause a fire. May cause kidney damage. May cause central nervous system effects. May cause cardiac disturbances. Harmful if inhaled or swallowed. Causes eye, skin, and respiratory tract irritation. Target Organs: Kidneys, central nervous system, muscles, cardiovascular system.

Potential Health Effects

Eye: Causes eye irritation.

Skin: Causes skin irritation. May be harmful if absorbed through the skin.

Ingestion: Harmful if swallowed. May cause kidney damage. Ingestion of nitrate containing compounds can lead to methemoglobinemia. The barium ion is a muscle poison causing stimulation and then paralysis. Initial symptoms are gastrointestinal, including nausea, vomiting, colic, and diarrhea, followed by myocardial and general muscular stimulation with tingling in the extremities. The barium ion is a muscle poison causing stimulation and then paralysis. Initial symptoms are gastrointestinal, including nausea, vomiting, colic, and diarrhea, followed by myocardial and general muscular stimulation with tingling in the extremities. The barium ion is a muscle poison causing stimulation and then paralysis. Initial symptoms are gastrointestinal, including nausea, vomiting, colic, and diarrhea, followed by myocardial and general muscular stimulation with tingling in the extremities.

Inhalation: Harmful if inhaled. Causes respiratory tract irritation. Inhalation at high concentrations may cause CNS depression and asphyxiation.

Chronic: Chronic exposure may cause effects similar to those of acute exposure.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower

eyelids. Get medical aid.

Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

Ingestion: Call a poison control center. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: For methemoglobinemia, administer oxygen alone or with Methylene Blue depending on the methemoglobin concentration in the blood. Institute cardiac monitoring for all significant ingestions of soluble barium salts. Institute cardiac monitoring for all significant ingestions of soluble barium salts.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Strong oxidizer. Contact with other material may cause fire.

Extinguishing Media: Use water spray to cool fire-exposed containers. Contact professional fire-fighters immediately. For small fires, do NOT use dry chemicals, carbon dioxide, halon or foams. USE WATER ONLY. For large fires, flood fire area with water from a distance.

Autoignition Temperature: Not applicable.

Flash Point: Not applicable.

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: ; instability: OX

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation. Do not use combustible materials such as paper towels to clean up spill.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Avoid contact with clothing and other combustible materials. Do not get on skin or in eyes. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage: Keep away from heat, sparks, and flame. Do not store near combustible materials. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from reducing agents.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Barium nitrate	0.5 mg/m3 TWA (as Ba) (listed under Barium, soluble compounds).	0.5 mg/m3 TWA (as Ba) 50 mg/m3 IDLH (as Ba)	0.5 mg/m3 TWA (as Ba) (listed under Barium, soluble compounds).

OSHA Vacated PELs: Barium nitrate: 0.5 mg/m3 TWA (as Ba) (listed under Barium, soluble compounds)

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Personal Protective Equipment

- Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
- Skin: Wear appropriate gloves to prevent skin exposure.
- Clothing: Wear a chemical apron. Wear appropriate clothing to prevent skin exposure.
- Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Crystals

Color: white

Odor: odorless

pH: 5.0-8.0, 5% Aq. soln.

Vapor Pressure: Negligible.

Vapor Density: 9.0

Evaporation Rate: Not available

Viscosity: Not available

Boiling Point: Decomposes.

Freezing/Melting Point: 592 deg C (1,097.60°F)

Decomposition Temperature:

Solubility in water: moderate

Specific Gravity/Density: 3.24 @23C

Molecular Formula: Ba(NO₃)₂

Molecular Weight: 261.34

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Dust generation.

Incompatibilities with Other Materials: Reducing agents, acids, bases, aluminum, hydroxylamine, magnesium, phosphorus, zinc, esters (e.g. butyl acetate, ethyl acetate, propyl formate), combustible and flammable materials (e.g. alkyl resins, asphalt, gasoline, grease, methyl acetone, polystyrene, polyurethane), acid anhydrides, tin chloride.

Hazardous Decomposition Products: Nitrogen oxides, barium oxide.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#: CAS# 10022-31-8: CQ9625000

RTECS:

CAS# 10022-31-8: Draize test, rabbit, eye: 100 mg/24H Moderate;

Draize test, rabbit, skin: 500 mg/24H Mild;

LD50/LC50: Oral, mouse: LD50 = 266 mg/kg;

Oral, rat: LD50 = 355 mg/kg;

Oral, rat: LD50 = 390 mg/kg;

Carcinogenicity: Barium nitrate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Other: No information available.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: BARIUM NITRATE

Hazard Class: 5.1

UN Number: UN1446

Packing Group: II

Canada TDG

Shipping Name: BARIUM NITRATE

Hazard Class: 5.161

UN Number: UN1446

Packing Group: II

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN O

Risk Phrases:

R 20/22 Harmful by inhalation and if swallowed.

R 8 Contact with combustible material may cause fire.

Safety Phrases:

S 28 After contact with skin, wash immediately with...

WGK (Water Danger/Protection)

CAS# 10022-31-8: 1

Canada

CAS# 10022-31-8 is listed on Canada's DSL List

Canadian WHMIS Classifications: C, D1B, D2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 10022-31-8 is listed on Canada's Ingredient Disclosure List

US Federal

TSCA

CAS# 10022-31-8 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 9/14/1998

Revision #7 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.
