

Barium Nitrate

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Barium Nitrate

Synonyms/Generic Names: None

SDS Number: 85.00

Product Use: For Educational Use Only

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information Contact: Ward's Science
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Rochester, NY 14692
(800) 962-2660 (Monday-Friday 7:30-7:00 Eastern Time)

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: Oxidizer, Toxic by ingestion, Toxic by inhalation, Irritant

Target Organs: Kidney, Liver, Blood, Heart, Gastrointestinal system, Bone marrow, Spleen, Nerves

Signal Words: Danger

Pictograms:



GHS Classification:

Oxidizing solids	Category 2
Acute toxicity, Oral	Category 4
Acute toxicity, Inhalation	Category 4
Skin irritation	Category 3
Eye irritation	Category 2A

GHS Label Elements, including precautionary statements:

Hazard Statements:

H272	May intensify fire; oxidizer.
H302+H332	Harmful if swallowed or in contact with skin.
H316	Causes mild skin irritation.
H319	Causes serious eye irritation.

Precautionary Statements:

P220	Keep/store away from clothing/combustible materials.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

Potential Health Effects

Eyes	Causes eye irritation.
Inhalation	Toxic if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Ingestion	Toxic if swallowed.

NFPA Ratings

Health	2
Flammability	0
Reactivity	2
Specific hazard	OX

HMIS Ratings

Health	2
Fire	0
Reactivity	2
Personal	E

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Barium Nitrate	100	10022-31-8	233-020-5	Ba(NO ₃) ₂	261.34 g/mol

4. FIRST-AID MEASURES

Eyes	In case of eye contact, rinse with plenty of water and seek medical attention.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes (barium oxides, nitrogen oxides) under fire conditions. (See also Stability and Reactivity section).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Pick up and arrange disposal without creating dust. Sweep up and shovel. Clean surfaces thoroughly with water to remove residual

	contamination. Dispose of all waste and cleanup materials in accordance with regulations.
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7. HANDLING AND STORAGE

Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of dust.

Conditions for safe storage, including any incompatibilities

Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls: Ventilation and appropriate grounding of containers.

Component	Exposure Limits	Basis	Entity
Barium (7440-39-3) and soluble compounds, as Ba	0.5 mg/m ³	TLV	ACGIH
	0.5 mg/m ³	PEL	OSHA
	0.5 mg/m ³	REL	NIOSH

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

Personal Protection

Eyes	Wear chemical safety glasses or goggles.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, apron or lab coat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Other	Not Available

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	White crystals
Odor	Odorless
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	590°C (1,094°F)
Initial boiling point and boiling range	Decomposes
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Flammable

Vapor pressure	Not Available
Vapor density	Not Available
Relative density	Not Available
Solubility (ies)	Partially soluble
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Heat and moisture.
Incompatible Materials	Acid anhydrides, acids, bases, reducing agents, organics and combustible materials.
Hazardous Decomposition Products	Nitrogen oxides, barium oxide.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Skin	Skin – rabbit – Mild skin irritation – Draize test
Eyes	Eyes – rabbit – Moderate eye irritation – Draize test
Respiratory	Not Available
Ingestion	LD50 Oral – rat – 390 mg/kg Remarks: Behavioral: Somnolence, muscle weakness.

Carcinogenicity

IARC	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Redness, itching
Eyes	Redness, tearing, itching, burning, conjunctivitis
Respiratory	Irritation of mucous membranes, coughing, wheezing, shortness of breath,
Ingestion	Irritation and burning sensations of mouth and throat, nausea, vomiting and abdominal pain.

Chronic Toxicity	Not Available
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Not Available
Reproductive Toxicity	Not Available
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Vertebrate	Not Available
Aquatic Invertebrate	Not Available
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Not Available

13. DISPOSAL CONSIDERATIONS

Waste Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste products or residues.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	UN1446, Barium Nitrate, 5.1, (6.1), pg II
TDG	UN1446, BARIUM NITRATE, 5.1, (6.1), pg II
IMDG	UN1446, BARIUM NITRATE, 5.1, (6.1), pg II
Marine Pollutant	No
IATA/ICAO	UN1446, Barium Nitrate, 5.1, (6.1), pg II

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Not Listed
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Listed: Barium Nitrate
SARA 312	Listed: Barium Nitrate
SARA 313	Listed: Barium Nitrate
WHMIS Canada	Class C: Oxidizing material. Class D-1B: Toxic material causing immediate and serious toxic effects. Class D-2B: Toxic material causing other toxic effects.

16. OTHER INFORMATION

Revision	Date
Revision 1	01/04/2013
Revision 2	06/21/2013

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