

**Barium Nitrate**

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**1. PRODUCT AND COMPANY IDENTIFICATION**

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**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  
5100 West Henrietta Rd.  
PO Box 92912-9012  
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)

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**2. HAZARDS IDENTIFICATION**

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**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**

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

**NFPA Ratings**

<b>Health</b>	2
<b>Flammability</b>	0
<b>Reactivity</b>	2
<b>Specific hazard</b>	OX

**HMIS Ratings**

<b>Health</b>	2
<b>Fire</b>	0
<b>Reactivity</b>	2
<b>Personal</b>	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 <sub>3</sub> ) <sub>2</sub>	261.34 g/mol

**4. FIRST-AID MEASURES**

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

**5. FIRE-FIGHTING MEASURES**

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

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal precautions, protective equipment and emergency procedures</b>	See section 8 for recommendations on the use of personal protective equipment.
<b>Environmental precautions</b>	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
<b>Methods and materials for containment and cleaning up</b>	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

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### 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).

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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**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 <sup>3</sup>	TLV	ACGIH
	0.5 mg/m <sup>3</sup>	PEL	OSHA
	0.5 mg/m <sup>3</sup>	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

<b>Eyes</b>	Wear chemical safety glasses or goggles.
<b>Inhalation</b>	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
<b>Skin</b>	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.
<b>Other</b>	Not Available

### Other Recommendations

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

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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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

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## 10. STABILITY AND REACTIVITY

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

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## 11. TOXICOLOGICAL INFORMATION

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### Acute Toxicity

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

### Carcinogenicity

<b>IARC</b>	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.
<b>ACGIH</b>	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.
<b>NTP</b>	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.
<b>OSHA</b>	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

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

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

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## 12. ECOLOGICAL INFORMATION

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### Ecotoxicity

<b>Aquatic Vertebrate</b>	Not Available
<b>Aquatic Invertebrate</b>	Not Available
<b>Terrestrial</b>	Not Available

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

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## 13. DISPOSAL CONSIDERATIONS

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<b>Waste Residues</b>	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.
<b>Product Containers</b>	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.

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## 14. TRANSPORTATION INFORMATION

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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

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## 15. REGULATORY INFORMATION

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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.

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## 16. OTHER INFORMATION

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

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