

Common Name: **BARIUM NITRATE**

Synonyms: Barium Dinitrate; Nitric Acid, Barium Salt

CAS No: 10022-31-8

Molecular Formula: BaN<sub>2</sub>O<sub>6</sub>

RTK Substance No: 0186

Description: Colorless to white, odorless, crystalline powder

### HAZARD DATA

Hazard Rating	Firefighting	Reactivity
<p><b>2 - Health</b></p> <p><b>0 - Fire</b></p> <p><b>0 - Reactivity</b></p> <p><b>DOT#:</b> UN 1446</p> <p><b>ERG Guide #:</b> 141</p> <p><b>Hazard Class:</b> 5.1 (Oxidizer)</p>	<p><b>Barium Nitrate</b> is not combustible, but it is a <b>STRONG OXIDIZER</b> that enhances the combustion of other substances.</p> <p>Use water only. <b>DO NOT USE CO<sub>2</sub></b> as an extinguishing agent.</p> <p><b>POISONOUS GASES ARE PRODUCED IN FIRE</b>, including <i>Nitrogen Oxides</i> and <i>Barium Oxides</i>.</p> <p>Use water spray to keep fire-exposed containers cool.</p> <p><b>Barium Nitrate</b> may ignite combustibles (wood, paper and oil).</p>	<p><b>Barium Nitrate</b> may react with <b>COMBUSTIBLES</b>; <b>CHEMICALLY ACTIVE METALS</b> (such as <b>ALUMINUM</b>, <b>MAGNESIUM</b> and <b>ZINC</b>); and <b>METAL POWDERS</b> to cause a fire or explosion.</p> <p><b>Barium Nitrate</b> is not compatible with <b>OXIDIZING AGENTS</b> (such as <b>PERCHLORATES</b>, <b>PEROXIDES</b>, <b>PERMANGANATES</b>, <b>CHLORATES</b>, <b>NITRATES</b>, <b>CHLORINE</b>, <b>BROMINE</b> and <b>FLUORINE</b>) and <b>STRONG ACIDS</b> (such as <b>HYDROCHLORIC</b>, <b>SULFURIC</b> and <b>NITRIC</b>).</p>

### SPILL/LEAKS

**Isolation Distance:**

Spill: 25 meters (75 feet)

Fire: 800 meters (1/2 mile)

Moisten spilled material first or use a HEPA-filter vacuum for clean-up and place into sealed containers for disposal.

DO NOT wash into sewer.

**Barium Nitrate** is a marine pollutant and may bioaccumulate.

### PHYSICAL PROPERTIES

<b>Odor Threshold:</b>	Odorless
<b>Flash Point:</b>	Noncombustible
<b>Specific Gravity:</b>	3.24 (water = 1)
<b>Water Solubility:</b>	Soluble
<b>Boiling Point:</b>	Decomposes
<b>Melting Point:</b>	1,098°F (610°C)
<b>Molecular Weight:</b>	261.35

### EXPOSURE LIMITS

**OSHA:** 0.5 mg/m<sup>3</sup>, 8-hr TWA

**NIOSH:** 0.5 mg/m<sup>3</sup>, 10-hr TWA

**ACGIH:** 0.5 mg/m<sup>3</sup>, 8-hr TWA

**IDLH:** 50 mg/m<sup>3</sup>

(All the above are for *Barium*)

The Protective Action Criteria values are:

PAC-1 = 2.5 mg/m<sup>3</sup>    PAC-2 = 20 mg/m<sup>3</sup>

PAC-3 = 95.2 mg/m<sup>3</sup>

### PROTECTIVE EQUIPMENT

<b>Gloves:</b>	Nitrile and Natural Rubber
<b>Coveralls:</b>	Tyvek®
<b>Respirator:</b>	>0.5 mg/m <sup>3</sup> - Full facepiece APR with <i>P100</i> filters >50 mg/m <sup>3</sup> - SCBA

### HEALTH EFFECTS

<b>Eyes:</b>	Irritation and burns
<b>Skin:</b>	Irritation and burns
<b>Inhalation:</b>	Nose, throat and lung irritation with coughing, wheezing and shortness of breath  Nausea, vomiting, irregular heartbeat, muscle weakness, tremors, paralysis and death

### FIRST AID AND DECONTAMINATION

<b>Remove</b> the person from exposure.
<b>Flush</b> eyes with large amounts of water for at least 15 minutes. Remove contact lenses if worn.
<b>Quickly</b> remove contaminated clothing and wash contaminated skin with large amounts of water.
<b>Begin</b> artificial respiration if breathing has stopped and CPR if necessary.
<b>Transfer</b> promptly to a medical facility.