

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Barium nitrate

Supplier : United Nuclear Scientific  
125 N. 8th Street  
Klamath Falls, OR  
97601

Telephone : 541-205-6855

24 HR Emergency Number : 800-255-3924  
VelocityEHS

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

##### OSHA Hazards

Oxidizer, Toxic by inhalation., Toxic by ingestion, Irritant

##### Target Organs

Kidney, Liver, Blood, Heart, Gastro-intestinal system, Bone marrow, Spleen., Nerves.

##### 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

Pictogram



Signal word

Danger

Hazard statement(s)

H272

May intensify fire; oxidiser.

H302 + H332

Harmful if swallowed or if inhaled

H316

Causes mild skin irritation.

H319

Causes serious eye irritation.

Precautionary statement(s)

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. Continue rinsing.

#### HMIS Classification

Health hazard:

2

Flammability:

0

**Physical hazards:** 2

**NFPA Rating**

**Health hazard:** 2

**Fire:** 0

**Reactivity Hazard:** 2

**Special hazard.:** OX

**Potential Health Effects**

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

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Formula :  $\text{BaN}_2\text{O}_6$   
Molecular Weight : 261.34 g/mol

Component	Concentration
CAS-No. 10022-31-8 EC-No. 233-020-5 Index-No. 056-002-00-7	-

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**4. FIRST AID MEASURES**

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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**5. FIREFIGHTING MEASURES**

**Conditions of flammability**

Not flammable or combustible.

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for firefighters**

Wear self contained breathing apparatus for fire fighting if necessary.

**Hazardous combustion products**

Hazardous decomposition products formed under fire conditions. - nitrogen oxides (NOx)

**Further information**

Use water spray to cool unopened containers.

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**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

### Environmental precautions

Do not let product enter drains.

### Methods and materials for containment and cleaning up

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

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## 7. HANDLING AND STORAGE

### Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Keep away from heat and sources of ignition.

### Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Barium nitrate	10022-31-8	TWA	0.5 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	0.5 mg/m <sup>3</sup>	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	0.5 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Not classifiable as a human carcinogen			
		TWA	0.5 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
	Eye, skin, & Gastrointestinal irritation Muscular stimulation Not classifiable as a human carcinogen			
		TWA	0.5 mg/m <sup>3</sup>	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	0.5 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits
		TWA	0.5 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm  
Break through time: 480 min  
Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374  
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Eye protection**

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin and body protection**

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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## **9. PHYSICAL AND CHEMICAL PROPERTIES**

### **Appearance**

Form	solid
Colour	white

### **Safety data**

pH	no data available
Melting point/freezing point	Melting point/range: 592 °C (1,098 °F) - dec.
Boiling point	no data available
Flash point	no data available
Ignition temperature	no data available
Auto-ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Density	3.23 g/cm <sup>3</sup>
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Relative vapour density	no data available
Odour	odourless
Odour Threshold	no data available
Evaporation rate	no data available

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## **10. STABILITY AND REACTIVITY**

### **Chemical stability**

May explode when heated. Stable under recommended storage conditions.

**Possibility of hazardous reactions**

no data available

**Conditions to avoid**

Avoid moisture. Heat.

**Materials to avoid**

Acid anhydrides, Acids, Bases, Reducing agents

**Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - nitrogen oxides (NOx)

Other decomposition products - no data available

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**11. TOXICOLOGICAL INFORMATION****Acute toxicity****Oral LD50**

LD50 Oral - rat - 390 mg/kg

Remarks: Behavioral:Somnolence (general depressed activity).

LD50 Oral - Mammal - 390 mg/kg

Remarks: Behavioral:Muscle weakness. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

**Inhalation LC50****Dermal LD50**

no data available

**Other information on acute toxicity**

no data available

**Skin corrosion/irritation**

Skin - rabbit - Mild skin irritation - Draize Test

**Serious eye damage/eye irritation**

Eyes - rabbit - Moderate eye irritation - Draize Test

**Respiratory or skin sensitisation**

no data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component 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 component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**

no data available

**Teratogenicity**

no data available

**Specific target organ toxicity - single exposure (Globally Harmonized System)**

no data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

no data available

**Aspiration hazard**

no data available

**Potential health effects**

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

**Signs and Symptoms of Exposure**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Synergistic effects**

no data available

**Additional Information**

RTECS: CQ9625000

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**12. ECOLOGICAL INFORMATION****Toxicity**

no data available

**Persistence and degradability**

no data available

**Bioaccumulative potential**

no data available

**Mobility in soil**

no data available

**PBT and vPvB assessment**

no data available

**Other adverse effects**

no data available

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**13. DISPOSAL CONSIDERATIONS****Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging**

Dispose of as unused product.

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**14. TRANSPORT INFORMATION****DOT (US)**

UN number: 1446 Class: 5.1 (6.1) Packing group: II  
Proper shipping name: Barium nitrate  
Marine pollutant: No  
Poison Inhalation Hazard: No

**IMDG**

UN number: 1446 Class: 5.1 (6.1) Packing group: II EMS-No: F-A, S-Q  
Proper shipping name: BARIUM NITRATE  
Marine pollutant: No

**IATA**

UN number: 1446 Class: 5.1 (6.1) Packing group: II  
Proper shipping name: Barium nitrate

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**15. REGULATORY INFORMATION****OSHA Hazards**

Oxidizer, Toxic by inhalation., Toxic by ingestion, Irritant

**SARA 302 Components**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
Barium nitrate	10022-31-8	1993-04-24

**SARA 311/312 Hazards**

Reactivity Hazard, Acute Health Hazard

**Massachusetts Right To Know Components**

	CAS-No.	Revision Date
Barium nitrate	10022-31-8	1993-04-24

**Pennsylvania Right To Know Components**

	CAS-No.	Revision Date
Barium nitrate	10022-31-8	1993-04-24

**New Jersey Right To Know Components**

	CAS-No.	Revision Date
Barium nitrate	10022-31-8	1993-04-24

**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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**16. OTHER INFORMATION****Further information**

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