

## Barium Hydroxide 8-Hydrate

### SECTION 1. IDENTIFICATION

<b>Product Identifier</b>	Barium Hydroxide 8-Hydrate
<b>Other Means of Identification</b>	Barium Hydrate, Barium hydroxide octahydrate, Barium Salt
<b>Product Code(s)</b>	BA5210, BA5220
<b>Product Family</b>	Inorganic Solid
<b>Recommended Use</b>	Laboratory and industrial use.
<b>Restrictions on Use</b>	None known.
<b>Supplier Identifier</b>	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
<b>Emergency Phone No.</b>	CANUTEC CANADA, 613-996-6666, 24 Hours
<b>SDS No.</b>	0621

### SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

#### Classification

Acute toxicity (Oral) - Category 4; Acute toxicity (Inhalation) - Category 4; Skin corrosion - Category 1B; Serious eye damage - Category 1

#### Label Elements



Signal Word:  
Danger

#### Hazard Statement(s):

Harmful if swallowed.

Harmful if inhaled.

Causes severe skin burns and eye damage.

#### Precautionary Statement(s):

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

Wash hands and skin thoroughly after handling.

#### Response:

IF SWALLOWED: Call a POISON CENTRE/doctor/ if you feel unwell.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

---

Product Identifier: Barium Hydroxide 8-Hydrate

Date of Preparation: July 18, 2016

Page 01 of 06

IF ON SKIN: Wash with plenty of water.  
Immediately call a POISON CENTRE or doctor.

Storage:

Store in a dry place. Store in a closed container.

Disposal:

Dispose of contents and container in accordance with local, regional, national and international regulations.

#### Other Hazards

None known.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance:

Chemical Name	CAS No.	%	Other Identifiers
Barium hydroxide octahydrate	12230-71-6	> 98	Barium Hydrate, Barium hydroxide octahydrate, Barium Salt

### SECTION 4. FIRST-AID MEASURES

#### First-aid Measures

##### Inhalation

Remove source of exposure or move to fresh air. Keep at rest in a position comfortable for breathing. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor. Immediately call a Poison Centre or doctor.

##### Skin Contact

Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. If skin irritation occurs, get medical advice or attention.

##### Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Immediately call a Poison Centre or doctor.

##### Ingestion

Rinse mouth with water. Do not induce vomiting. Get medical advice or attention if you feel unwell.

##### First-aid Comments

Some of the first-aid procedures recommended here require advanced first-aid training. Get medical advice or attention if you feel unwell or are concerned.

#### Most Important Symptoms and Effects, Acute and Delayed

If in eyes: may cause serious eye damage. May irritate or burn the eyes. Permanent damage including blindness may result. If inhaled: can irritate the nose and throat. If on skin: may burn the skin. Permanent scarring may result.

#### Immediate Medical Attention and Special Treatment

##### Special Instructions

General advice

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

### SECTION 5. FIRE-FIGHTING MEASURES

#### Extinguishing Media

##### Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire. Use water to keep non-leaking, fire-exposed containers cool.

##### Unsuitable Extinguishing Media

None known.

#### Specific Hazards Arising from the Product

Product Identifier: Barium Hydroxide 8-Hydrate

Date of Preparation: July 18, 2016

Page 02 of 06

Does not burn. Heating increases the release of toxic vapour. Closed containers may rupture violently when heated releasing contents.

In a fire, the following hazardous materials may be generated: very toxic carbon monoxide, carbon dioxide. Barium Oxides.

#### **Special Protective Equipment and Precautions for Fire-fighters**

Fight fire from a safe distance or a protected location. Approach fire from upwind to avoid hazardous vapours or gases. Knock down vapours or gases with water fog or fine water spray. Dike and recover contaminated water for appropriate disposal. Before entry, especially into confined areas, use an appropriate monitor to check for: toxic gases or vapours, sufficient oxygen.

Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

### **Personal Precautions, Protective Equipment, and Emergency Procedures**

Use the personal protective equipment recommended in Section 8 of this safety data sheet. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Remove or isolate incompatible materials as well as other hazardous materials.

### **Environmental Precautions**

Do not allow into any sewer, on the ground or into any waterway.

### **Methods and Materials for Containment and Cleaning Up**

Avoid generating dust. Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal. Flush spill area. Dike and recover contaminated water for appropriate disposal.

## **SECTION 7. HANDLING AND STORAGE**

### **Precautions for Safe Handling**

Avoid generating dusts. Only use where there is adequate ventilation. Wear personal protective equipment to avoid direct contact with this chemical. Prevent accidental contact with incompatible chemicals. Never add water to a corrosive. Always add corrosives slowly to COLD water. Keep containers tightly closed when not in use or empty. Wash hands thoroughly after handling this material.

### **Conditions for Safe Storage**

Store in an area that is: cool, dry, well-ventilated, separate from incompatible materials (see Section 10: Stability and Reactivity). Protect from conditions listed in Conditions to Avoid in Section 10 (Stability and Reactivity). Store in a closed container.

## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **Control Parameters**

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Barium hydroxide octahydrate	0.5 mg/m <sup>3</sup>		0.5 mg/m <sup>3</sup>			

### **Appropriate Engineering Controls**

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air.

### **Individual Protection Measures**

#### **Eye/Face Protection**

Wear chemical safety goggles and face shield when contact is possible.

#### **Skin Protection**

Wear chemical protective clothing e.g. gloves, aprons, boots.

Suitable materials are: polyvinyl chloride, neoprene rubber.

#### **Respiratory Protection**

Wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Basic Physical and Chemical Properties

<b>Appearance</b>	White crystals.
<b>Odour</b>	Odourless
<b>Odour Threshold</b>	Not available
<b>pH</b>	13.11
<b>Melting Point/Freezing Point</b>	78 °C (172 °F) (melting); 78 °C (172 °F) (freezing)
<b>Initial Boiling Point/Range</b>	780 °C (1436 °F)
<b>Flash Point</b>	Not available
<b>Evaporation Rate</b>	Not available
<b>Flammability (solid, gas)</b>	Will not burn.
<b>Upper/Lower Flammability or Explosive Limit</b>	Not available (upper); Not available (lower)
<b>Vapour Pressure</b>	1 kPa (8 mm Hg)
<b>Vapour Density (air = 1)</b>	Not applicable
<b>Relative Density (water = 1)</b>	2.18
<b>Solubility</b>	Soluble in water; Mildly soluble in alcohols (e.g. ethanol).
<b>Partition Coefficient, n-Octanol/Water (Log Kow)</b>	Not available
<b>Auto-ignition Temperature</b>	Not available
<b>Decomposition Temperature</b>	> 780 °C (1436 °F)
<b>Viscosity</b>	Not available (kinematic); Not available (dynamic)
<b>Other Information</b>	
<b>Physical State</b>	Solid

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

None known.

### Chemical Stability

Normally stable.

### Possibility of Hazardous Reactions

None known.

### Conditions to Avoid

Incompatible materials. Exposure to air.

### Incompatible Materials

Strong acids (e.g. hydrochloric acid), strong oxidizing agents (e.g. perchloric acid).

### Hazardous Decomposition Products

Barium Oxides. Very toxic carbon monoxide, carbon dioxide.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

### Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Barium hydroxide	Not available	557 mg/kg (rat)	Not available

Product Identifier: Barium Hydroxide 8-Hydrate

Date of Preparation: July 18, 2016

Page 04 of 06

octahydrate

### **Skin Corrosion/Irritation**

There is limited evidence of moderate or severe irritation.

### **Serious Eye Damage/Irritation**

There is limited evidence of serious eye irritation.

### **STOT (Specific Target Organ Toxicity) - Single Exposure**

#### **Inhalation**

May cause nose and throat irritation.

#### **Ingestion**

Harmful May cause irritation of the mouth, throat and stomach. Symptoms may include nausea, vomiting, stomach cramps and diarrhea.

### **Aspiration Hazard**

No information was located.

### **STOT (Specific Target Organ Toxicity) - Repeated Exposure**

May cause effects on the central nervous system, irritation of the respiratory system. Respiratory tract injury has been observed, harmful effects on the liver.

### **Respiratory and/or Skin Sensitization**

No information was located.

### **Carcinogenicity**

<b>Chemical Name</b>	<b>IARC</b>	<b>ACGIH®</b>	<b>NTP</b>	<b>OSHA</b>
Barium hydroxide octahydrate	Not Listed	Not designated	Not Listed	Not Listed

### **Reproductive Toxicity**

#### **Development of Offspring**

No information was located.

#### **Sexual Function and Fertility**

No information was located.

#### **Effects on or via Lactation**

No information was located.

### **Germ Cell Mutagenicity**

No information was located.

### **Interactive Effects**

No information was located.

## **SECTION 12. ECOLOGICAL INFORMATION**

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

## **SECTION 13. DISPOSAL CONSIDERATIONS**

### **Disposal Methods**

Dispose of contents and container in accordance with local, regional, national and international regulations.

## **SECTION 14. TRANSPORT INFORMATION**

<b>Regulation</b>	<b>UN No.</b>	<b>Proper Shipping Name</b>	<b>Transport Hazard Class(es)</b>	<b>Packing Group</b>
IMO (Marine)	UN1564	Barium Compounds, N.O.S. (Barium Hydroxide)	6.1	III
IATA (Air)	UN1564	Barium Compounds, N.O.S. (Barium Hydroxide)	6.1	III

Product Identifier: Barium Hydroxide 8-Hydrate

Date of Preparation: July 18, 2016

US DOT	UN1564	Barium Compounds, N.O.S. (Barium Hydroxide)	6.1	III
Canadian TDG	UN1564	Barium Compounds, N.O.S. (Barium Hydroxide)	6.1	III

**Special Precautions** Not applicable

**Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

## SECTION 15. REGULATORY INFORMATION

**Safety, Health and Environmental Regulations**

**Canada**

**Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)**

Listed on the DSL.

**USA**

**Toxic Substances Control Act (TSCA) Section 8(b)**

Listed on the TSCA Inventory.

## SECTION 16. OTHER INFORMATION

**SDS Prepared By** Alphachem Limited

**Phone No.** (905)-821-2995

**Date of Preparation** July 18, 2016

**Date of Last Revision** July 19, 2016

**References** CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).

**Disclaimer** This document is offered only as a guide in the safe handling of the above product, and has been prepared from the best information currently available. It is not intended to be all-inclusive and the conditions of use may involve other additional considerations. Since Alphachem Limited cannot anticipate or control the conditions under which the product may be used, it will not be liable for any claims, damages or losses which may result from the use or reliance on any information herein.