

## SAFETY DATA SHEET

Creation Date 26-Sep-2009

Revision Date 17-Jan-2018

Revision Number 5

### 1. Identification

**Product Name** Barium hydroxide, anhydrous

**Cat No. :** B47-250; B47-500

**CAS-No** 17194-00-2  
**Synonyms** No information available

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Not for food, drug, pesticide or biocidal product use

#### Details of the supplier of the safety data sheet

##### Company

Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

##### **Emergency Telephone Number**

CHEMTREC®, Inside the USA: 800-424-9300  
CHEMTREC®, Outside the USA: 001-703-527-3887

### 2. Hazard(s) identification

#### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|                                             |              |
|---------------------------------------------|--------------|
| Acute oral toxicity                         | Category 4   |
| Acute Inhalation Toxicity - Dusts and Mists | Category 4   |
| Skin Corrosion/irritation                   | Category 1 A |
| Serious Eye Damage/Eye Irritation           | Category 1   |

#### Label Elements

##### **Signal Word**

Danger

##### **Hazard Statements**

Harmful if swallowed  
Causes severe skin burns and eye damage  
Harmful if inhaled



**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Use only outdoors or in a well-ventilated area  
Do not breathe dust/fume/gas/mist/vapors/spray  
Wear protective gloves/protective clothing/eye protection/face protection

**Response**

Immediately call a POISON CENTER or doctor/physician

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

**Skin**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
Wash contaminated clothing before reuse

**Eyes**

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

**Ingestion**

Rinse mouth  
Do NOT induce vomiting

**Storage**

Store locked up  
Store in a well-ventilated place. Keep container tightly closed

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Corrosive to the respiratory tract  
May cause cardiac arrhythmia

### 3. Composition/Information on Ingredients

| Component                               | CAS-No     | Weight % |
|-----------------------------------------|------------|----------|
| Barium hydroxide (Ba(OH) <sub>2</sub> ) | 17194-00-2 | > 95     |

### 4. First-aid measures

**General Advice**

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. Keep eye wide open while rinsing.

**Skin Contact**

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician immediately.

**Inhalation**

Move to fresh air. If not breathing, give artificial respiration. Call a physician or Poison Control Center immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

**Ingestion**

Immediate medical attention is required. Do not induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person.

**Most important symptoms and effects**

Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

**Notes to Physician** Treat symptomatically

## 5. Fire-fighting measures

**Suitable Extinguishing Media** CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam.

**Unsuitable Extinguishing Media** No information available

**Flash Point** Not applicable  
**Method -** No information available

**Autoignition Temperature**

**Explosion Limits**

**Upper** No data available

**Lower** No data available

**Sensitivity to Mechanical Impact** No information available

**Sensitivity to Static Discharge** No information available

### Specific Hazards Arising from the Chemical

The product causes burns of eyes, skin and mucous membranes.

### Hazardous Combustion Products

None known

### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

### NFPA

**Health**  
3

**Flammability**  
0

**Instability**  
1

**Physical hazards**  
N/A

## 6. Accidental release measures

**Personal Precautions** Use personal protective equipment. Evacuate personnel to safe areas. Avoid contact with skin, eyes and clothing.

**Environmental Precautions** Should not be released into the environment. Do not allow material to contaminate ground water system.

**Methods for Containment and Clean Up** Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

## 7. Handling and storage

**Handling** Do not get in eyes, on skin, or on clothing. Wear personal protective equipment. Use only under a chemical fume hood. Do not breathe dust. Do not ingest.

**Storage** Keep containers tightly closed in a cool, well-ventilated place. Corrosives area. Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. Exposure controls / personal protection

### Exposure Guidelines

| Component                               | ACGIH TLV                  | OSHA PEL                             | NIOSH IDLH                                               | Mexico OEL (TWA)           |
|-----------------------------------------|----------------------------|--------------------------------------|----------------------------------------------------------|----------------------------|
| Barium hydroxide (Ba(OH) <sub>2</sub> ) | TWA: 0.5 mg/m <sup>3</sup> | (Vacated) TWA: 0.5 mg/m <sup>3</sup> | IDLH: 50 mg/m <sup>3</sup><br>TWA: 0.5 mg/m <sup>3</sup> | TWA: 0.5 mg/m <sup>3</sup> |

### Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

**Engineering Measures** Ensure that eyewash stations and safety showers are close to the workstation location.

#### Personal Protective Equipment

**Eye/face Protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection** Long sleeved clothing.

**Respiratory Protection** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

### 9. Physical and chemical properties

|                                               |                                 |
|-----------------------------------------------|---------------------------------|
| <b>Physical State</b>                         | Solid                           |
| <b>Appearance</b>                             | Clear                           |
| <b>Odor</b>                                   | Odorless                        |
| <b>Odor Threshold</b>                         | No information available        |
| <b>pH</b>                                     | 12.0 Alkaline                   |
| <b>Melting Point/Range</b>                    | 78 °C / 172.4 °F                |
| <b>Boiling Point/Range</b>                    | 780 °C / 1436 °F                |
| <b>Flash Point</b>                            | Not applicable                  |
| <b>Evaporation Rate</b>                       | Not applicable                  |
| <b>Flammability (solid,gas)</b>               | No information available        |
| <b>Flammability or explosive limits</b>       |                                 |
| <b>Upper</b>                                  | No data available               |
| <b>Lower</b>                                  | No data available               |
| <b>Vapor Pressure</b>                         | negligible                      |
| <b>Vapor Density</b>                          | Not applicable                  |
| <b>Specific Gravity</b>                       | 2.18                            |
| <b>Solubility</b>                             | Soluble in water                |
| <b>Partition coefficient; n-octanol/water</b> | No data available               |
| <b>Autoignition Temperature</b>               |                                 |
| <b>Decomposition Temperature</b>              | No information available        |
| <b>Viscosity</b>                              | Not applicable                  |
| <b>Molecular Formula</b>                      | BaH <sub>2</sub> O <sub>2</sub> |
| <b>Molecular Weight</b>                       | 171.34                          |

### 10. Stability and reactivity

**Reactive Hazard** None known, based on information available

**Stability** Stable under normal conditions.

**Conditions to Avoid** Avoid dust formation. Incompatible products.

**Incompatible Materials** Strong oxidizing agents

**Hazardous Decomposition Products** None under normal use conditions

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

### Acute Toxicity

#### Product Information

#### Component Information

| Component                               | LD50 Oral                | LD50 Dermal | LC50 Inhalation |
|-----------------------------------------|--------------------------|-------------|-----------------|
| Barium hydroxide (Ba(OH) <sub>2</sub> ) | LD50 = 308 mg/kg ( Rat ) | Not listed  | Not listed      |

**Toxicologically Synergistic Products** No information available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Irritation** Causes burns by all exposure routes

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component                               | CAS-No     | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|-----------------------------------------|------------|------------|------------|------------|------------|------------|
| Barium hydroxide (Ba(OH) <sub>2</sub> ) | 17194-00-2 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** None known

**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

### Ecotoxicity

Do not empty into drains.

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

**DOT**

UN-No UN3262  
 Proper Shipping Name CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.  
 Proper technical name Barium hydroxide (Ba(OH)<sub>2</sub>)  
 Hazard Class 8  
 Packing Group II

**TDG**

UN-No UN3262  
 Proper Shipping Name CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.  
 Hazard Class 8  
 Packing Group II

**IATA**

UN-No UN3262  
 Proper Shipping Name CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.  
 Hazard Class 8  
 Packing Group II

**IMDG/IMO**

UN-No UN3262  
 Proper Shipping Name CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.  
 Hazard Class 8  
 Packing Group II

## 15. Regulatory information

All of the components in the product are on the following Inventory lists: X = listed

**International Inventories**

| Component                               | TSCA | DSL | NDSL | EINECS    | ELINCS | NLP | PICCS | ENCS | AICS | IECSC | KECL |
|-----------------------------------------|------|-----|------|-----------|--------|-----|-------|------|------|-------|------|
| Barium hydroxide (Ba(OH) <sub>2</sub> ) | X    | X   | -    | 241-234-5 | -      |     | X     | X    | X    | X     | X    |

**Legend:**

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

**U.S. Federal Regulations**

TSCA 12(b) Not applicable

**SARA 313**

| Component                               | CAS-No     | Weight % | SARA 313 - Threshold Values % |
|-----------------------------------------|------------|----------|-------------------------------|
| Barium hydroxide (Ba(OH) <sub>2</sub> ) | 17194-00-2 | > 95     | 1.0                           |

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration

Not applicable

**CERCLA** Not applicable

**California Proposition 65** This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know  
Regulations**

| Component                                  | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|--------------------------------------------|---------------|------------|--------------|----------|--------------|
| Barium hydroxide<br>(Ba(OH) <sub>2</sub> ) | -             | X          | X            | -        | X            |

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
DOT Marine Pollutant N  
DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** No information available

## 16. Other information

**Prepared By** Regulatory Affairs  
Thermo Fisher Scientific  
Email: EMSDS.RA@thermofisher.com

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**Print Date** 17-Jan-2018

**Revision Summary** This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). SDS sections updated. 14.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**