Material Safety Data Sheet
Barium Hydroxide Anhydrous

ACC# 02420

Section 1 - Chemical Product and Company Identification

MSDS Name: Barium Hydroxide Anhydrous
Catalog Numbers: B46 250, B46250, B47 250, B47 500, B47-250, B47-500, B47250, B47500
Synonyms: Barium hydrate, barium anhydrous
Company Identification:
Fisher Scientific
1 Reagent Lane
Fairlawn, NJ 07410
For information, call: 201-796-7100
Emergency Number: 201-796-7100
For CHEMTREC assistance, call: 800-424-9300
For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>E1P</th>
</tr>
</thead>
<tbody>
<tr>
<td>17194-00-2</td>
<td>Barium hydroxide anhydrous</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: colourless. **Danger!** Corrosive. May cause kidney damage. May cause nervous system effects. Causes eye and skin burns. Causes digestive and respi
burns.
**Target Organs:** Kidneys, central nervous system.

**Potential Health Effects**

**Eye:** Contact with liquid or vapor causes severe burns and possible irreversible eye damage. Visual eye irritation.

**Skin:** May cause severe skin irritation. Causes skin burns.

**Ingestion:** May be fatal if swallowed. Causes gastrointestinal tract burns. May cause respiratory irritation, severe pain, nausea, vomiting, diarrhea, and shock. May cause kidney failure.

**Inhalation:** May cause severe irritation of the upper respiratory tract with pain, burns, and inflammation. Chronic: Chronic inhalation and ingestion may cause effects similar to those of acute inhalation.

---

**Section 4 - First Aid Measures**

**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

**Skin:** Wash skin with plenty of soap and water for at least 15 minutes while removing contamination. Get medical aid if irritation develops or persist.

**Ingestion:** Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or other liquid. Get medical aid immediately.

**Inhalation:** Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**Notes to Physician:** Treat symptomatically and supportively.

**Antidote:** The use of d-Penicillamine as a chelating agent should be determined by qualified medical personnel.

---

**Section 5 - Firefighting Measures**

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand MSHA/NIOSH (approved or equivalent), and full protective gear. Use extinguishing media appropriate for surrounding fire. Substance is nonflammable.

**Extinguishing Media:** Substance is nonflammable; use water, foam, or dry chemical to extinguish small fires.

**Autoignition Temperature:** Not available.

**Flash Point:** Not available (estimated)

**Health:** Health: Odorless, colorless, and runs freely.

**Flammability:** Flammable.

**Reactivity:** Explosion Limits, Low: Not available. Upper: Not available.

---

**Section 6 - Accidental Release Measures**

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical resistant container. Vacuum or sweep up material and place into a suitable disposal container. Avoid contact with skin, eyes, or clothing.

---

**Section 7 - Handling and Storage**

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before re-use. Do not get on skin or in eyes. Do not ingest or inhale.

**Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from heat or flame.

---
acids.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium hydroxide anhydrous</td>
<td>none listed</td>
<td>none listed</td>
<td>nc</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs: Barium hydroxide anhydrous: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European standards. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: Colourless

Odor: Odorless

pH: Alkaline

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not applicable.

Boiling Point: 1436 deg F

Freezing/Melting Point: 172.4 deg F

Decomposition Temperature: Not available.

Solubility: Moderately in water (5.6g/100cc).

Specific Gravity/Density: 2.16 (Water = 1)

Molecular Formula: Ba(OH)2

Molecular Weight: 179.32

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid: None reported.

Incompatibilities with Other Materials: Acids.

Hazardous Decomposition Products: None.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information
RTECS#:  
CAS# 17194-00-2: CQ9200000  
LD50/LC50:  
Not available.

Carcinogenicity:  
CAS# 17194-00-2:  
ACGIH: A4 - Not Classifiable as a Human Carcinogen (listed as BARIUM).  
Epidemiology: No information available.  
Teratogenicity: No information available.  
Reproductive Effects: No information available.  
Neurotoxicity: No information available.  
Mutagenicity: No information available.  
Other Studies: None.

Section 12 - Ecological Information

Ecotoxicity: No information available.  
Environmental Fate: No information reported.  
Physical/Chemical: No information available.  
Other: None.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.  
RCRA D-Series Maximum Concentration of Contaminants: None listed.  
RCRA D-Series Chronic Toxicity Reference Levels: None listed.  
RCRA F-Series: None listed.  
RCRA P-Series: None listed.  
RCRA U-Series: None listed.

Section 14 - Transport Information

<table>
<thead>
<tr>
<th>Shipping Name:</th>
<th>US DOT</th>
<th>IATA</th>
<th>RID/ADR</th>
<th>IM</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORROSIVE SOLID,BASIC,INORGANIC,N.O.S (BARIUM HYDROXIDE)</td>
<td>No information available</td>
<td>No information available</td>
<td>No information available, CO SOLIDS (BAR HYDRO)</td>
<td></td>
</tr>
<tr>
<td>Hazard Class:</td>
<td>8</td>
<td></td>
<td></td>
<td>8(9)</td>
</tr>
<tr>
<td>UN Number:</td>
<td>UN3262</td>
<td></td>
<td></td>
<td>UN1'</td>
</tr>
<tr>
<td>Packing Group:</td>
<td>II</td>
<td></td>
<td></td>
<td>II</td>
</tr>
</tbody>
</table>
US FEDERAL

TSCA
CAS# 17194-00-2 is listed on the TSCA inventory.

Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.

Section 12b
None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.

SARA

Section 302 (RQ)
None of the chemicals in this material have an RQ.

Section 302 (TPQ)
None of the chemicals in this product have a TPQ.

SARA Codes
CAS # 17194-00-2: acute, chronic.

Section 313
This material contains Barium hydroxide anhydrous (listed as BARIUM), 100%, (CAS# 17194-01)
subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:
This material does not contain any hazardous air pollutants. This material does not contain any
depleters. This material does not contain any Class 2 Ozone depleters.

Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA. Nor
chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals
are listed as Toxic Pollutants under the CWA.

OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.

STATE
CAS# 17194-00-2 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations
European Labelling in Accordance with EC Directives
Hazard Symbols:
Not available.
Risk Phrases:

Safety Phrases:

WGK (Water Danger/Protection)
CAS# 17194-00-2: 1

Canada
CAS# 17194-00-2 is listed on Canada's DSL/NDSL List.
This product has a WHMIS classification of E, D1A, D2B.
CAS# 17194-00-2 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits
CAS# 17194-00-2 (listed as barium): OEL-AUSTRALIA:TWA 0.5 mg/m3 OEL-A
USTRIA:TWA 0.5 mg/m3 OEL-BELGIUM:TWA 0.5 mg/m3 OEL-DENMARK:TWA 0.5 m
g/m3 OEL-FINLAND:TWA 0.5 mg/m3 OEL-GERMANY:TWA 0.5 mg/m3 (total dust
) OEL-HUNGARY: STEL 0.5 mg/m3 OEL-THE NETHERLANDS:TWA 0.5 mg/m3 OEL-
THE PHILIPPINES:TWA 0.5 mg/m3 OEL-POLAND:TWA 0.5 mg/m3; STEL 1.5 mg/m3
OEL-SWITZERLAND: TWA 0.5 mg/m³; STEL 1 mg/m³
OEL-TURKEY: TWA 0.5 mg/m³
OEL-UNITED KINGDOM: TWA 0.5 mg/m³
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGIH TLV

Section 16 - Additional Information

MSDS Creation Date: 12/19/1994
Revision #7 Date: 12/12/1997
The information above is believed to be accurate and represents the best information currently available to us. However, of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability Users should make their own investigations to determine the suitability of the information for their particular purposes. In liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential damages, however arising, even if Fisher has been advised of the possibility of such damages.

Need help with a product? Send email to Fisher's customer service or call us at 1-800-766-701