SECTION 1: Identification

1.1. Identification
Product form: Mixture
Product name: Barium Hydroxide, Saturated
Product code: LC11640

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture: For laboratory and manufacturing use only.

1.3. Details of the supplier of the safety data sheet
LabChem Inc
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

1.4. Emergency telephone number
Emergency number: CHEMTREC: 1-800-424-9300 or 011-703-527-3887

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture
GHS-US classification
Skin corrosion/irritation Category 2 H315
Serious eye damage/eye irritation Category 1 H318
Full text of H statements: see section 16

2.2. Label elements
GHS-US labeling
Hazard pictograms (GHS-US):

Signal word (GHS-US): Danger
Hazard statements (GHS-US):
H315 - Causes skin irritation
H318 - Causes serious eye damage

Precautionary statements (GHS-US):
P264 - Wash exposed skin thoroughly after handling
P280 - Wear protective gloves, eye protection
P302+P352 - IF ON SKIN: Wash with plenty of soap and water
P305+P351+P338 - IF in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a poison center or doctor/physician
P332+P313 - If skin irritation occurs: Get medical advice/attention
P362+P364 - Take off contaminated clothing and wash it before reuse

2.3. Other hazards
Other hazards not contributing to the classification: None under normal conditions.

2.4. Unknown acute toxicity (GHS US)
Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substance
Not applicable

3.2. Mixture
Not applicable
### Barium Hydroxide, Saturated

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>(CAS No) 7732-18-5</td>
<td>96.85</td>
<td>Not classified</td>
</tr>
<tr>
<td>Barium Hydroxide, Octahydrate</td>
<td>(CAS No) 12230-71-6</td>
<td>3.15</td>
<td>Acute Tox. 4 (Oral), H302</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 4 (Inhalation), H332</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Corr. 1A, H314</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Dam. 1, H318</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STOT SE 3, H335</td>
</tr>
</tbody>
</table>

Full text of hazard classes and H-statements: see section 16

**SECTION 4: First aid measures**

4.1. **Description of first aid measures**

First-aid measures general: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation: Allow victim to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. **Most important symptoms and effects, both acute and delayed**

Symptoms/injuries after skin contact: Causes skin irritation.

Symptoms/injuries after eye contact: Causes serious eye damage.

Symptoms/injuries after ingestion: Irritation of the oral mucous membranes.

4.3. **Indication of any immediate medical attention and special treatment needed**

Obtain medical assistance.

**SECTION 5: Firefighting measures**

5.1. **Extinguishing media**


Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. **Special hazards arising from the substance or mixture**

No additional information available

5.3. **Advice for firefighters**

Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

**SECTION 6: Accidental release measures**

6.1. **Personal precautions, protective equipment and emergency procedures**

6.1.1. **For non-emergency personnel**

Protective equipment: Protective goggles. Gloves.

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. **For emergency responders**

Protective equipment: Equip cleanup crew with proper protection.

Emergency procedures: Ventilate area.

6.2. **Environmental precautions**

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. **Methods and material for containment and cleaning up**

Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. **Reference to other sections**

See Heading 8. Exposure controls and personal protection.
SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

Hygiene measures: Wash exposed skin thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Keep only in the original container in a cool, well ventilated place away from incompatible materials. Keep container closed when not in use.

Incompatible products: Strong acids.

Incompatible materials: Air sensitive.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th></th>
<th>ACGIH ACGIH TWA (mg/m³)</th>
<th>OSHA OSHA PEL (TWA) (mg/m³)</th>
<th>IDLH US IDLH (mg/m³)</th>
<th>NIOSH NIOSH REL (TWA) (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium Hydroxide, Octahydrate (12230-71-6)</td>
<td>0.5 mg/m³ as Ba</td>
<td>0.5 mg/m³ as Ba</td>
<td>50 mg/m³ as Ba</td>
<td>0.5 mg/m³ as Ba</td>
</tr>
<tr>
<td>Water (7732-18-5)</td>
<td>Not applicable</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation.


Hand protection: Wear protective gloves.

Eye protection: Chemical goggles or safety glasses.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: Respiratory protection not required in normal conditions.

Other information: Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>None.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Non flammable.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Barium Hydroxide, Saturated  
Safety Data Sheet  
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific gravity / density</td>
<td>1.03 g/ml</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water.</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Absorbs atmospheric CO2.

10.3. Possibility of hazardous reactions
Not established.

10.4. Conditions to avoid
Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials
Strong acids.

10.6. Hazardous decomposition products
barium.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure : Skin and eye contact
Acute toxicity : Not classified

Barium Hydroxide, Octahydrate (12230-71-6)

<table>
<thead>
<tr>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>550 mg/kg</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>550.000 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (gases)</td>
<td>4500.000 ppmV/4h</td>
</tr>
<tr>
<td>ATE US (vapors)</td>
<td>11.000 mg/l/4h</td>
</tr>
<tr>
<td>ATE US (dust, mist)</td>
<td>1.500 mg/l/4h</td>
</tr>
</tbody>
</table>

Water (7732-18-5)

<table>
<thead>
<tr>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>≥ 90000 mg/kg</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>90000.000 mg/kg body weight</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation        : Causes skin irritation.
Serious eye damage/irritation    : Causes serious eye damage.
Respiratory or skin sensitization: Not classified
Germ cell mutagenicity          : Not classified
Carcinogenicity                 : Not classified
Reproductive toxicity           : Not classified
Specific target organ toxicity (single exposure): Not classified
Specific target organ toxicity (repeated exposure): Not classified
### Aspiration hazard
- Not classified

### Potential Adverse human health effects and symptoms
- Based on available data, the classification criteria are not met.

### Symptoms/injuries after skin contact
- Causes skin irritation.

### Symptoms/injuries after eye contact
- Causes serious eye damage.

### Symptoms/injuries after ingestion
- Irritation of the oral mucous membranes.

## SECTION 12: Ecological information

### 12.1. Toxicity
- No additional information available

### 12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Substance</th>
<th>Persistence and degradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium Hydroxide, Saturated</td>
<td>Not established.</td>
</tr>
<tr>
<td>Barium Hydroxide, Octahydrate (12230-71-6)</td>
<td>Not established.</td>
</tr>
<tr>
<td>Water (7732-18-5)</td>
<td>Not established.</td>
</tr>
</tbody>
</table>

### 12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Substance</th>
<th>Bioaccumulative potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium Hydroxide, Saturated</td>
<td>Not established.</td>
</tr>
<tr>
<td>Barium Hydroxide, Octahydrate (12230-71-6)</td>
<td>Not established.</td>
</tr>
<tr>
<td>Water (7732-18-5)</td>
<td>Not established.</td>
</tr>
</tbody>
</table>

### 12.4. Mobility in soil
- No additional information available

### 12.5. Other adverse effects
- No known effects from this product.
- No known effects from this product.
- Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods
- Dispose in a safe manner in accordance with local/national regulations.
- Avoid release to the environment.

## SECTION 14: Transport information

### Department of Transportation (DOT)
- UN3266 Corrosive liquid, basic, inorganic, n.o.s., 8, III
- UN-No.(DOT): UN3266
- Proper Shipping Name (DOT): Corrosive liquid, basic, inorganic, n.o.s.
- Transport hazard class(es) (DOT): 8 - Class 8 - Corrosive material 49 CFR 173.136
- Packing group (DOT): III - Minor Danger
Barium Hydroxide, Saturated
Safety Data Sheet

Hazard labels (DOT) : 8 - Corrosive

DOT Symbols : G - Identifies PSN requiring a technical name

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203
DOT Packaging Bulk (49 CFR 173.xxx) : 241

DOT Special Provisions (49 CFR 172.102) :
IB3 - Authorized IBC: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).

TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx) : 154

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L

DOT Vessel Stowage Location :
A - The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel.

DOT Vessel Stowage Other :
40 - Stow “clear of living quarters”,52 - Stow “separated from” acids

Other information : No supplementary information available.

SECTION 15: Regulatory information

15.1. US Federal regulations

Barium Hydroxide, Saturated

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

Barium Hydroxide, Octahydrate (CAS No 12230-71-6) 3.15%

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

Barium Hydroxide, Octahydrate (12230-71-6)

WHMIS Classification
Barium Hydroxide, Octahydrate (12230-71-6)

Water (7732-18-5)

WHMIS Classification

Uncontrolled product according to WHMIS classification criteria

12/14/2016
EN (English US)
Barium Hydroxide, Saturated
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EU-Regulations
No additional information available

National regulations
Barium Hydroxide, Octahydrate (12230-71-6)
Listed on the Canadian IDL (Ingredient Disclosure List)

15.3. US State regulations
California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information
Revision date: 12/14/2016
Other information: None.

Full text of H-phrases: see section 16:

<table>
<thead>
<tr>
<th>H302</th>
<th>Harmful if swallowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
<tr>
<td>H332</td>
<td>Harmful if inhaled</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
</tbody>
</table>

NFPA health hazard: 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.

NFPA fire hazard: 0 - Materials that will not burn.

NFPA reactivity: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

HMIS III Rating
Health: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given.

Flammability: 0 Minimal Hazard - Materials that will not burn

Physical: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection: C
C - Safety glasses, Gloves, Synthetic apron

SDS US LabChem

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