

MSDS# 02421

Section 1 - Chemical Product and Company Identification

MSDS Name: Barium hydroxide octahydrate

Catalog Numbers: AC203140000, AC203140010, AC203140050, AC203140250, AC203142500, AC423460000
AC423460000, AC423460050, AC423465000, B46-250, B46-500

Synonyms: Barium dihydroxide octahydrate.

Company Identification: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 201-796-7100
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

Risk Phrases:

CAS#: 12230-71-6
Chemical Name: Barium hydroxide octahydrate
%: 98+
EINECS#: unlisted
Hazard Symbols:

Text for R-phrases: see Section 16

Hazard Symbols: C



Risk Phrases: 20/22 34

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! Causes burns by all exposure routes. Harmful if inhaled or swallowed. Target Organs: Respiratory system, gastrointestinal system, eyes, skin.

Potential Health Effects

Eye: Causes eye burns.
Skin: Causes skin burns. May be harmful if absorbed through the skin.
Ingestion: Harmful if swallowed. Causes gastrointestinal tract burns.
Inhalation: Harmful if inhaled. Causes chemical burns to the respiratory tract.
Chronic: No information found.

Section 4 - First Aid Measures

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

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Do not induce vomiting. Get medical aid immediately. Call a poison control center.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting 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.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.

Autoignition Temperature: Not applicable.

Flash Point: Not applicable.

Explosion Limits: Not available
Lower:

Explosion Limits: Not available
Upper:

NFPA Rating: health: 3; flammability: 0; instability: 1;

Section 6 - Accidental Release Measures

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

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Avoid generating dusty conditions. Provide ventilation. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling: Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use only in a chemical fume hood.

Storage: Store in a cool, dry place. Store in a tightly closed container. Corrosives area. Store under nitrogen.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Barium hydroxide octahydrate	0.5 mg/m3 TWA (as Ba) (listed under Barium, soluble compounds).	0.5 mg/m3 TWA (as Ba, except barium sulfate) (listed under Barium, soluble compounds).	0.5 mg/m3 TWA (as Ba) (listed under Barium, soluble compounds).
Barium hydroxide anhydrous	0.5 mg/m3 TWA (as Ba) (listed under Barium, soluble compounds).	0.5 mg/m3 TWA (as Ba, except barium sulfate) (listed under Barium, soluble compounds).	0.5 mg/m3 TWA (as Ba) (listed under Barium, soluble compounds).

OSHA Vacated PELs: Barium hydroxide octahydrate: 0.5 mg/m3 TWA (as Ba) (listed under Barium, soluble compounds)
Barium hydroxide anhydrous: 0.5 mg/m3 TWA (as Ba) (listed under Barium, soluble compounds)

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

Exposure Limits

Personal Protective Equipment

Eyes: 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: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Color: white

Odor: odorless

pH: 12.5 (50 g/L aq. sol.)

Vapor Pressure: Negligible.

Vapor Density: Not available

Evaporation Rate: Negligible.

Viscosity: Not available

Boiling Point: Not available

Freezing/Melting Point: 78 deg C (172.40°F)

Decomposition Temperature:

Solubility in water: 56 g/L (15°C)

Specific Gravity/Density: 2.18

Molecular Formula: Ba(OH)2.8H2O

Molecular Weight: 315.48

Section 10 - Stability and Reactivity

Chemical Stability: Absorbs carbon dioxide from the air.

Conditions to Avoid: Incompatible materials, dust generation, exposure to air.

Incompatibilities with Other Materials: Acids, aluminum.

Hazardous Decomposition Products: Barium oxide.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 12230-71-6: None listed
CAS# 17194-00-2: CQ9200000

RTECS: Not available. RTECS:

LD50/LC50: CAS# **17194-00-2**: Oral, rat: LD50 = 308 mg/kg;

Carcinogenicity: Barium hydroxide octahydrate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Barium hydroxide anhydrous - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: The toxicological properties have not been fully investigated.

Section 12 - Ecological Information

Other: Do not empty into drains.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: CORROSIVE SOLIDS, TOXIC, N.O.S.

Hazard Class: 8

UN Number: UN2923

Packing Group: III

Canada TDG

Shipping Name: CORROSIVE SOLIDS, TOXIC, N.O.S.

Hazard Class: 8

UN Number: UN2923

Packing Group: III

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: C

Risk Phrases:

R 20/22 Harmful by inhalation and if swallowed.

R 34 Causes burns.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 12230-71-6: 1

CAS# 17194-00-2: 1

Canada

CAS# 17194-00-2 is listed on Canada's DSL List

Canadian WHMIS Classifications: E, D1B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 12230-71-6 is not listed on Canada's Ingredient Disclosure List.

CAS# 17194-00-2 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 12230-71-6 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the Inventory (40CFR720.3(u)(2)).

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

Section 16 - Other Information

MSDS Creation Date: 9/14/1998

Revision #10 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.
