

SIGMA-ALDRICH

Material Safety Data Sheet

Version 3.0
Revision Date 12/28/2008
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Barium hydroxide octahydrate
Product Number : 217573
Brand : Sigma-Aldrich
Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA
Telephone : +1 800-325-5832
Fax : +1 800-325-5052
Emergency Phone # : (314) 776-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : H₂BaO₂ · 8H₂O
Molecular Weight : 315.46 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
12230-71-6	241-234-5	-	-

3. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Target Organ Effect, Harmful by ingestion., Corrosive

Target Organs

Heart, Nerves., Kidney, Gastrointestinal tract, Bone marrow, Spleen., Liver

HMIS Classification

Health Hazard: 3
Chronic Health Hazard: *
Flammability: 0
Physical hazards: 0

NFPA Rating

Health Hazard: 3
Fire: 0
Reactivity Hazard: 0

Potential Health Effects

Inhalation May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

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Skin
Eyes
Ingestion

May be harmful if absorbed through skin. Causes skin burns.
Causes eye burns.
Harmful if swallowed. Causes burns.

4. FIRST AID MEASURES

General advice

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

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Continue rinsing eyes during transport to hospital. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Flammable properties

Flash point not applicable

Ignition temperature no data available

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions

Do not let product enter drains.

Methods for cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Storage

Keep container tightly closed in a dry and well-ventilated place.

Air sensitive.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
Barium hydroxide	12230-71-6	TWA	0.5 mg/m3	1993-06-30	US. Department of Labor - Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL) 29 CFR 1910.1000 Air Contaminants.
		TWA	0.5 mg/m3	1989-03-01	US. Department of Labor - Occupational Safety and Health Administration (OSHA) 29 CFR 1910.1000 Z-1-A
		TWA	0.5 mg/m3	1996-05-18	US. American Conference of Governmental and Industrial Hygienists Threshold Limit Values for Chemical Substances in the Work Environment; Annual Reports for the Year 2004; Committees on Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs)
Remarks	The agent (mixture, or exposure circumstance) is not classifiable as to its carcinogenicity to humans. Refers to Appendix A -- Carcinogens. 1996 Adoption				

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves.

Eye protection

Safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form solid

Safety data

pH 12,5 at 50 g/l at 20 °C (68 °F)
Melting point 78 °C (172 °F)
Boiling point no data available
Flash point not applicable
Ignition temperature no data available
Lower explosion limit no data available
Upper explosion limit no data available
Density 2,180 g/cm3
Water solubility soluble

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Materials to avoid

acids

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Barium oxide

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - rat - 550 mg/kg

Irritation and corrosion

no data available

Sensitisation

no data available

Chronic exposure

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea

Potential Health Effects

Inhalation May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Skin May be harmful if absorbed through skin. Causes skin burns.

Eyes Causes eye burns.

Ingestion Harmful if swallowed. Causes burns.

Target Organs Heart, Nerves., Kidney, Gastrointestinal tract, Bone marrow, Spleen., Liver,

12. ECOLOGICAL INFORMATION**Elimination Information (persistence and degradability)**

no data available

Ecotoxicity effects

no data available

Further Information on ecology

no data available

13. DISPOSAL CONSIDERATIONS**Product**

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**DOT (US)**

UN-Number: 3262 Class: 8 Packing group: II
 Proper shipping name: Corrosive solid, basic, inorganic, n.o.s. (Barium hydroxide)
 Marine pollutant: No
 Poison Inhalation Hazard: No

IMDG

UN-Number: 3262 Class: 8 Packing group: II EMS-No: F-A, S-B
 Proper shipping name: CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (Barium hydroxide)
 Marine pollutant: No

IATA

UN-Number: 3262 Class: 8 Packing group: II
 Proper shipping name: Corrosive solid, basic, inorganic n.o.s. (Barium hydroxide)

15. REGULATORY INFORMATION**OSHA Hazards**

Target Organ Effect, Harmful by ingestion., Corrosive

DSL Status

All components of this product are on the Canadian DSL list.

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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SARA 313 Components

Barium hydroxide

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 12230-71-6

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SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

Barium hydroxide

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Revision Date
 1987-01-01

New Jersey Right To Know Components

Barium hydroxide

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Revision Date
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California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

16. OTHER INFORMATION**Further information**

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