

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name Barium Hydroxide Crystals
CAS number 12230-71-6
Synonyms Barium Hydroxide Octahydrate

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses Laboratory chemicals

1.3 Details of the supplier of the safety data sheet

Company Lab Alley, LLC
12501 Pauls Valley Road
Austin, Texas 78737
U.S.A.
Telephone 512-668-9918
Fax 512-886-4008

1.4 Emergency telephone

Emergency Phone # US & Canada: 1-800-535-5053 INFOTRAC
International 1-352-323-3500 INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute oral toxicity	Category 4
Acute inhalation toxicity - Dusts and mists	Category 4
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard statements

Causes severe skin burns and eye damage
Harmful if swallowed or 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

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Corrosive to the respiratory tract

May cause cardiac arrhythmia

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Barium Hydroxide Octahydrate	-	12230-71-6	>95%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled	Remove 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.
In case of skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician immediately.
In case of 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.
If swallowed	Immediate medical attention is required. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

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

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician: Treat symptomatically

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media CO₂, dry chemical, dry sand, alcohol-resistant foam.

Unsuitable extinguishing media No information available

5.2 Specific hazards arising from the substance or mixture

No information available

5.3 Special 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.

5.4 Further information

Flash Point No information available

Autoignition Temperature No information available

Explosion limits

Upper No information available

Lower No information available
Sensitivity to Mechanical Impact No information available
Sensitivity to Static Discharge No information available
NFPA

Health	Flammability	Instability	Physical hazards
3	0	1	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing.

6.2 Environmental precautions

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

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

6.4 Reference to other sections

See section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe dust. Do not ingest. If swallowed then seek immediate medical assistance.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed. Keep in a dry, cool and well-ventilated place. Keep under nitrogen. Corrosives area. Incompatible materials.

Incompatibilities

Acids. Metals. Aluminum.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
Barium hydroxide octahydrate	(Vacated) TWA	0.5 mg/m ³

US. ACGIH Threshold Limit Values

Component	Type	Value
Barium hydroxide octahydrate	TWA	0.5 mg/m ³

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Barium hydroxide octahydrate	IDLH	50 mg/m ³
	TWA	0.5 mg/m ³

Biological occupational exposure limits

Component	Type	Value
Barium hydroxide octahydrate	TWA	0.5 mg/m ³

8.2 Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas. 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 protection

Wear appropriate protective gloves and clothing to prevent skin exposure

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.

Control of environmental exposure

No information available

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Solid
Appearance	White
Odor	Odorless
Odor Threshold	No information available
pH	12.5
Melting Point/Range	78 °C
Boiling Point/Range	No information available
Evaporation Rate	No information available
Flammability (solid)	No information available
Flammability or explosive limit	No information available
Vapor Pressure	No information available
Vapor Density	Not applicable
Density	2.18
Solubility	ca. 1.07 kg/m ³
Partition coefficient; n-octanol/water	No information available
Autoignition Temp	No information available
Decomposition Temp	No information available
Viscosity	Not applicable
Molecular Formula	H ₂ Ba O ₂ · 8 H ₂ O
Molecular Weight	315.48
VOC Content(%)	No information available
Oxidizing properties	No information available

9.2 Other safety information

No information available

SECTION 10: Stability and reactivity

10.1 Reactivity

None known, based on information available

10.2 Chemical stability

Stable under normal conditions. Air sensitive.

10.3 Possibility of hazardous reactions

None known, based on information available

10.4 Conditions to avoid

Exposure to air. Incompatible products. Exposure to moist air or water

10.5 Incompatible materials

Acids, metals, aluminum

10.6 Hazardous decomposition products

Barium oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Barium hydroxide octahydrate	550 mg/kg	Not listed	Not listed

Skin corrosion/irritation

Causes burns by all exposure routes

Serious eye damage/eye irritation

None known

Respiratory or skin sensitization

None known

Germ cell mutagenicity

No information available

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Barium hydroxide octahydrate	12230-71-6	Not listed	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure

None known

Specific target organ toxicity - repeated exposure

None known

Reproductive toxicity

No information available

Chronic effects

No information available

11.2 Additional Information

No information available

SECTION 12: Ecological information

12.1 Toxicity

Do not empty into drains

12.2 Persistence and degradability

Soluble in water. Persistence is unlikely based on information available

12.3 Bio accumulative potential

No information available

12.4 Mobility in soil

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

12.5 Results of PBT and vPvB assessment

No information available

12.6 Endocrine disrupting properties

No information available

12.7 Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1 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.

SECTION 14: Transport information

DOT (US)

UN-no.	UN3262
Proper Shipping Name	Corrosive solid, basic, inorganic, n.o.s.
Technical Name	Barium hydroxide octahydrate
Hazard Class	8
Packing Group	II

IMDG

UN-no.	UN3262
Proper Shipping Name	Corrosive solid, basic, inorganic, n.o.s.
Technical Name	Barium hydroxide octahydrate
Hazard Class	8
Packing Group	II

IATA

UN-no.	UN3262
Proper Shipping Name	Corrosive solid, basic, inorganic, n.o.s.
Technical Name	Barium hydroxide octahydrate
Hazard Class	8
Packing Group	II

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Listed (N-PROPYL ALCOHOL (CAS 71-23-8))

CERCLA Hazardous Substance List (40 CFR 302.4)
Listed

SARA 304 Emergency release notification
Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous
See section 2 for more information

SARA 313 (TRI reporting)
Barium hydroxide octahydrate - Threshold Values %: 1.0

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act
Not regulated

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace
Not listed

US state regulations

US. Massachusetts RTK - Substance List
Not listed

US. New Jersey Worker and Community Right-to-Know Act
Listed

US. Pennsylvania Worker and Community Right-to-Know Law
Listed

California Proposition 65
Not listed

SECTION 16: Other information

Issue date: 7/26/2024
Revision 0

SECTION 17: Disclaimer

The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.