



Barium Hydroxide Monohydrate		Pricing >
Linear Formula	Ba(OH) ₂ •H ₂ O	
Pubchem CID	16211219	
MDL Number	MFCD00149151	
EC No.	241-234-5	
IUPAC Name	barium(2+); dihydroxide; hydrate	
Beilstein/Reaxys No.	N/A	
SMILES	O.[OH-].[OH-].[Ba+2]	
Inchl Identifier	InChI=1S/Ba.3H2O/h;3*1H2/q+2;;;/p-2	
Inchl Key	GKQTUHKAKWLIN-UHFFFAOYSA-L	
Signal Word	Danger	
Hazard Statements	H302 + H332-H314	
Hazard Codes	C	
Risk Codes	20/22-34	
Safety Statements	26-28-36/37/39-45	
RTECS Number	N/A	
Transport Information	UN 3262 8 / PGIII	
WGK Germany	1	
GHS Pictograms	<p>GHS05 Corrosive</p>  <p>GHS08 Health Hazard</p> 	

[Create Printable PDF](#)

SAFETY DATA SHEET

Date Accessed: 03/29/2024

Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifiers: All applicable American Elements product codes for CAS #22326-55-2

Relevant identified uses of the substance:
Scientific research and development

Supplier details:
American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
Tel: +1 310-208-0551
Fax: +1 310-208-0351

Emergency telephone number:
Domestic, North America +1 800-424-9300
International +1 703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

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

Acute toxicity, Oral (Category 4), H302
Acute toxicity, Inhalation (Category 4), H332
Skin corrosion (Category 1B), H314
Serious eye damage (Category 1), H318

2.2 GHS Label elements, including precautionary statements



Pictogram

Signal word Danger

Hazard statement(s)

H302 + H332 Harmful if swallowed or if inhaled

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

Precautionary statement(s)

P260 Do not breathe dust or mist.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Remove/
Take off immediately all contaminated
clothing. Rinse skin with water/ shower.
P304 + P340 + P310 IF INHALED: Remove victim to
fresh air and keep at rest in a position
comfortable for breathing. Immediately call a POISON
CENTER or
doctor/ physician.
P305 + P351 + P338 + P310 IF IN EYES: 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.
P363 Wash contaminated clothing before reuse.
P405 Store locked up.
P501 Dispose of contents/ container to an approved
waste disposal plant.
2.3 Hazards not otherwise classified (HNOC) or not
covered by GHS - none

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances
Formula : $\text{H}_2\text{BaO}_2 \cdot \text{H}_2\text{O}$
Molecular weight : 189.36 g/mol
CAS-No. : 22326-55-2
EC-No. : 241-234-5
Hazardous components
Component Classification Concentration
Barium hydroxide monohydrate
Acute Tox. 4; Skin Corr. 1B;
Eye Dam. 1; H302 + H332,
H314, H318
≤ 100 %

SECTION 4. FIRST AID MEASURES

4.1 Description of 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

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

If swallowed

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

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Barium oxide

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing Vapors, mist or gas.

Ensure adequate

ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust.

Sweep up and shovel. Keep in suitable, closed containers for

disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result

in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration

before additional processing occurs.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

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

Keep in a dry place.

Storage class (TRGS 510): Non-combustible, corrosive hazardous materials

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Component CAS-No. Value Control parameters

Basis

Barium hydroxide

monohydrate

22326-55-2 TWA 0.500000

mg/m³

USA. Occupational Exposure Limits

(OSHA) - Table Z-1 Limits for Air

Contaminants

TWA 0.500000

mg/m³

USA. ACGIH Threshold Limit Values

(TLV)

Remarks Eye irritation

Muscular stimulation

Skin irritation

Gastrointestinal irritation

Not classifiable as a human carcinogen

TWA 0.500000

mg/m³

USA. NIOSH Recommended

Exposure Limits

8.2 Exposure controls

Appropriate engineering controls

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

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after

use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method:

EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the

supplier of the CE approved gloves. This

recommendation is advisory only and must be evaluated by an

industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers.

It

should not be construed as offering an approval for any specific use scenario.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to

the concentration and amount of the dangerous substance at the specific workplace.

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).

Control of environmental exposure

Do not let product enter drains.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance Form: powder

Colour: white

b) Odor No data available

c) Odor Threshold No data available

d) pH 13.1 at 21.0 g/l at 25 °C (77 °F)

e) Melting point/freezing

point

No data available

f) Initial boiling point and

boiling range

g) Flash point N/A

h) Evaporation rate No data available

i) Flammability (solid, gas) No data available

j) Upper/lower

flammability or

explosive limits

No data available

k) Vapor pressure 300 hPa (225 mmHg) at 78 °C (172 °F)

l) Vapor density No data available

m) Relative density 3.743 g/cm³ at 25 °C (77 °F)

n) Water solubility 40 g/l at 20 °C (68 °F)

o) Partition coefficient: octanol/

water

No data available

p) Auto-ignition

temperature

No data available

q) Decomposition

temperature

780 °C (1,436 °F) -

r) Viscosity No data available

s) Explosive properties No data available
t) Oxidizing properties No data available
9.2 Other safety information
No data available

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available
10.2 Chemical stability
Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions
No data available
10.4 Conditions to avoid
No data available
10.5 Incompatible materials
acids
10.6 Hazardous decomposition products
Other decomposition products - No data available
In the event of fire: see section 5

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute toxicity
LD50 Oral - Rat - 308 mg/kg
Dermal: No data available
No data available
Skin corrosion/irritation
No data available
Serious eye damage/eye irritation
No data available
Respiratory or skin sensitisation
No data available
Germ cell mutagenicity
No data available
Carcinogenicity
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.
Reproductive toxicity
No data available
No data available

Specific target organ toxicity - single exposure
No data available
Specific target organ toxicity - repeated exposure
No data available
Aspiration hazard
No data available
Additional Information
RTECS: Not available
Material is extremely destructive to tissue of the
mucous membranes and upper respiratory tract, eyes,
and skin.,
spasm, inflammation and edema of the larynx, spasm,
inflammation and edema of the bronchi, pneumonitis,
pulmonary
edema, burning sensation, Cough, wheezing,
laryngitis, Shortness of breath, Headache, Nausea,
Vomiting
To the best of our knowledge, the chemical, physical,
and toxicological properties have not been thoroughly
investigated.
Stomach - Irregularities - Based on Human Evidence
Stomach - Irregularities - Based on Human Evidence

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity
No data available
12.2 Persistence and degradability
No data available
12.3 Bioaccumulative potential
No data available
12.4 Mobility in soil
No data available
12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical
safety assessment not required/not conducted
12.6 Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Product
Offer surplus and non-recyclable solutions to a
licensed disposal company. 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.

SECTION 14. TRANSPORT INFORMATION

DOT (US)
UN number: 3262 Class: 8 Packing group: III
Proper shipping name: Corrosive solid, basic,
inorganic, n.o.s. (Barium hydroxide monohydrate)
Reportable Quantity (RQ):
Poison Inhalation Hazard: No
IMDG
UN number: 3262 Class: 8 Packing group: III EMS-
No: F-A, S-B
Proper shipping name: CORROSIVE SOLID, BASIC,
INORGANIC, N.O.S. (Barium hydroxide
monohydrate)
IATA
UN number: 3262 Class: 8 Packing group: III
Proper shipping name: Corrosive solid, basic,
inorganic, n.o.s. (Barium hydroxide monohydrate)

SECTION 15. REGULATORY INFORMATION

SARA 302 Components
No chemicals in this material are subject to the
reporting requirements of SARA Title III, Section 302.
SARA 313 Components
The following components are subject to reporting
levels established by SARA Title III, Section 313:
Barium hydroxide monohydrate
CAS-No.
22326-55-2
Revision Date
2007-07-01
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 monohydrate
CAS-No.
22326-55-2
Revision Date
2007-07-01
New Jersey Right To Know Components
Barium hydroxide monohydrate
CAS-No.

22326-55-2

Revision Date

2007-07-01

California Prop. 65 Components

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

16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.
