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Section 1. Identification

Product identifier

Product Identity Barium Hydroxide Monohydrate

Other means of identification Not Applicable

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

See Technical Data Sheet.

Details of the supplier of the safety data sheet

Company Name Silver Fern Chemical, Inc.

121 W. De La Guerra Street, Suite B Santa Barbara, CA 93101 USA Customer Service: 1-866-282-3384/

info@silverfernchemical.com

Website - www.silverfernchemical.com

Emergency

24 hour Emergency Emergency telephone number

Telephone No. Infotrac: 1-800-535-5053; Outside USA & Canada +1-352-

323-3500

Customer Service:

Section 2. Hazard(s) identification

Classification of the substance or mixture under OSHA's Hazard Communication Standard (1910.1200) revised 2024 (GHS revision 7)

Acute toxicity(oral), category 4;H302 Harmful if swallowed.

Acute toxicity(inhalation), category 4;H332 Harmful if inhaled.

Skin corrosion/irritation category 1B;H314 Causes severe skin burns and eye



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damage.

Causes serious eye damage.

Serious eye damage / eye irritation, category 1;H318

Label elements





Danger

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H332 Harmful if inhaled.

[Prevention]

P260 Do not breathe dust, fume, mist, vapors or spray.

P264 Wash 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.

[Response]

P301+312 IF SWALLOWED: Call a POISON CENTER, doctor or physician if you feel unwell.

P303+361+353 IF ON SKIN (or hair): Remove, take off immediately all contaminated clothing. Rinse skin with water, shower.

P304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+351+338 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, doctor or physician.

P312 Call a POISON CENTER, doctor or physician if you feel unwell.

P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P363 Wash contaminated clothing before reuse.

[Storage]

P405 Store locked up.

[Disposal]

P501 Dispose of contents or container in accordance with local and national regulations.

Other hazards

This product contains no PBT/vPvB/vPvM chemicals.

This product contains no endocrine disrupting chemicals.



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Does not contain component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS) per US or Canadian regulations.

Section 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the OSHA's Hazard Communication Standard (1910.1200) revised 2024 (GHS revision 7).

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes	
Barium hydroxide, monohydrate CAS Number: 22326-55-2	80 - 100	Acute toxicity(oral), category 4;H302 Skin corrosion/irritation category 1B;H314	No data available	
Synonyms: No available information		Acute toxicity(inhalation), category 4;H332	No data avaitable	

The actual concentration or concentration range is withheld as a trade secret.

Section 4. First aid measures

Description of first aid measures

General In all cases of doubt, or when symptoms persist, seek medical attention.

Never give anything by mouth to an unconscious person.

Inhalation Remove to fresh air, keep patient warm and at rest. If breathing is irregular or

stopped, give artificial respiration. If unconscious, place in the recovery position

and obtain immediate medical attention. Give nothing by mouth.

Eyes Rinse with plenty of clean water for at least 15 minutes, holding the eyelids

apart and seek medical attention.

Skin Remove contaminated clothing. Wash skin thoroughly with soap and water or

use a recognized skin cleanser.

Ingestion If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce

vomiting.

Most important symptoms and effects, both acute and delayed

Overview No specific symptom data available.

^{*}PBT/vPvB - PBT, vPvM or vPvB-substance.

The full texts of the phrases are shown in Section 16.



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No chronic toxicity or long term toxicity information available. Treat symptomatically. See section 2 for further details.

Inhalation Harmful if inhaled.

Eyes Causes serious eye damage.

Skin Causes severe skin burns and eye damage.

Ingestion Harmful if swallowed.

Section 5. Fire-fighting measures

Extinguishing media

Recommended extinguishing media; alcohol resistant foam, CO₂, powder, water spray. Unsuitable extinguishing media: Do not use; water jet.

Special hazards arising from the substance or mixture

Hazardous decomposition: No hazardous decomposition data available. Do not breathe dust, fume, mist, vapors or spray.

Advice for fire-fighters

As with all fires, wear positive pressure, self-contained breathing apparatus, (SCBA) with a full face piece and protective clothing. Persons without respiratory protection should leave area. Wear SCBA during clean-up immediately after fire. No smoking.

ERG Guide No. 154

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8). Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.



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Environmental precautions

Do not allow spills to enter drains or waterways.

Methods and material for containment and cleaning up

Ventilate the area and avoid breathing vapors. Take the personal protective measures listed in section 8.

Contain and absorb spillage with non-combustible materials e.g. sand, earth, and vermiculite. Place in closed containers outside buildings and dispose of according to the Waste Regulations.

Section 7. Handling and storage

Precautions for safe handling

Handle containers carefully to prevent damage and spillage. See section 2 for further details. - [Prevention]

Conditions for safe storage, including any incompatibilities

Incompatible materials: No available information See section 2 for further details. - [Storage]

Specific end use(s)

No available information

Section 8. Exposure controls / personal protection

Control parameters

Exposure Limits

CAS No.	Ingredient	Source	Value
22326-55-2	Barium hydroxide, monohydrate	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit



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Exposure controls

Respiratory If workers are exposed to concentrations above the exposure limit they must

use the appropriate, certified respirators.

Eyes Wear safety glasses with side shields to protect the eyes. An eye wash

station is suggested as a good workplace practice.

Skin Avoid skin contact. Wear PVC or rubber gloves to keep skin contact to a

minimum. Refer to the manufacturer's recommendations regarding the

suitability of any gloves used.

Engineering Controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection

must be worn.

Other Work

Use good personal hygiene practices. Wash hands before eating, drinking,

Practices smoking or using toilet. Promptly remove soiled clothing and wash

thoroughly before reuse.

See section 2 for further details.

Section 9. Physical and chemical properties

Information on basic physical and chemical properties

Physical State White, Granular

Color White

Odor No available information

Melting point / freezing point 78°C

Initial boiling point and boiling range No available information

Flammability (solid, gas) Not Applicable

Upper/lower flammability or explosive Lower Explosive Limit: No available

limits information

Upper Explosive Limit: No available

information

Flash Point

Auto-ignition temperature

No available information

No available information

No available information



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pH No available information
 Viscosity (cSt) No available information
 Solubility in Water 100% Miscible in Water.
 Partition coefficient n-octanol/water (Log
 No available information

Kow)

Vapor pressure (Pa) No available information

Relative Density 3.743 @ 16°C.

Vapor Density No available information

Evaporation rate (Ether = 1)No available informationOxidising propertiesNo available informationExplosive propertiesNo available information

Other information

No other relevant information.

Section 10. Stability and reactivity

Reactivity

Hazardous Polymerization will not occur.

Chemical stability

Stable under normal circumstances.

Possibility of hazardous reactions

No available information

Conditions to avoid

Avoid high temperatures and contact with incompatible material

Incompatible materials

No available information

Hazardous decomposition products

No hazardous decomposition data available.



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Section 11. Toxicological information

Acute toxicity

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Barium hydroxide, monohydrate - (22326-55-2)	No data	No data	No data	No data	No data
	available.	available.	available.	available.	available.

Carcinogen Data

CAS No.	Ingredient	Source	Value
22326-55-2	Barium hydroxide, monohydrate	OSHA	Regulated Carcinogen: No;
		NTP	Known: No; Suspected: No;
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No;
		ACGIH	No Established Limit

Classification	Category	Hazard Description
Acute toxicity (oral)	4	Harmful if swallowed.
Acute toxicity (dermal)		Not Applicable
Acute toxicity (inhalation)	4	Harmful if inhaled.
Skin corrosion/irritation	1B	Causes severe skin burns and eye damage.
Serious eye damage/irritation	1	Causes serious eye damage.
Respiratory sensitization		Not Applicable
Skin sensitization		Not Applicable
Germ cell mutagenicity		Not Applicable
Carcinogenicity		Not Applicable
Reproductive toxicity		Not Applicable
STOT-single exposure		Not Applicable
STOT-repeated exposure		Not Applicable
Aspiration hazard		Not Applicable



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Possible routes of entry: No available information

Symptoms and effects, both acute and delayed:

No specific symptom data available.

No chronic toxicity or long term toxicity information available. Treat symptomatically.

Eyes Causes serious eye damage.

Skin Causes severe skin burns and eye damage.

Ingestion Harmful if swallowed.

Section 12. Ecological information

Toxicity

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish,	48 hr EC50 crustacea,	ErC50 algae,
	mg/L	mg/L	mg/L
Barium hydroxide, monohydrate - (22326-55-2)	No data available.	No data available.	No data available.

Persistence and degradability

There is no data available on the preparation itself.

Bioaccumulative potential

No available information

Mobility in soil

No available information

Results of PBT and vPvB assessment

This product contains no PBT/vPvB/vPvM chemicals.

Other adverse effects

No available information



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Section 13. Disposal considerations

Waste treatment methods

Observe all federal, provincial and local regulations when disposing of this substance.

Section 14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
UN number	UN3262	UN3262	UN3262
UN proper	UN3262, Corrosive solid,	Corrosive solid, basic,	Corrosive solid, basic,
shipping	basic, inorganic, n.o.s.	inorganic, n.o.s. (Barium	inorganic, n.o.s.
name	(Barium hydroxide, monohydrate),8,III	hydroxide, monohydrate) (Barium hydroxide, monohydrate)
Transport	Class:8	Class:8	Class:8
hazard	Sub Class:Not Applicable	Sub Class:Not	Sub Class:Not
class(es)		Applicable	Applicable
Packing group	III	III	III

Environmental hazards

IMDG Marine Pollutant: No; **Special precautions for user**

No available information



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Section 15. Regulatory information

Regulatory Overview The regulatory data in Section 15 is not intended to be all-inclusive, only

selected regulations are represented.

Classification of the substance or mixture under OSHA's Hazard Communication Standard (1910.1200) revised 2024 (GHS revision 7)

Toxic Substance Control Act (TSCA)

CAS Number	Ingredient	Toxic Substance Control Act (TSCA)	Comments	Status
0022326-55-2	Barium hydroxide, monohydrate	No		

The following flags are used:

- •Active indicates commercial status designation of active
- •E indicates a substance that is the subject of a Section 5(e) Consent Order under TSCA.
- •F indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
- •N indicates a polymeric substance containing no free-radical initiator in its Inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
- •P indicates a commenced Premanufacture Notice (PMN) substance.
- •R indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
- •S indicates a substance that is identified in a final Significant New Uses Rule.
- •SP indicates a substance that is identified in a proposed Significant New Uses Rule.
- •T indicates a substance that is the subject of a final Section 4 test rule under TSCA.
- •UVCB Chemical Substances of Unknown or Variable Composition, Complex Reaction Products and Biological Materials •XU indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).
- •Y1 indicates a polymer that has a number-average molecular weight greater than 1,000 and that was exempt under the 1984 polymer exemption rule.
- •Y2 indicates a polymer that is a polyester and that was exempt under the 1984 polymer exemption rule.

EPCRA 302 Extremely Hazardous:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.



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EPCRA 313 Toxic Chemicals:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Carcinogens (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Developmental Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Female Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Male Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 Label Warning:

This product contains no chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Mass RTK Substances (>1%):

(No Product Ingredients Listed)

New Jersey RTK Substances (>1%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Pennsylvania RTK Substances (>1%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

OSHA Process Safety Management Standard Highly Hazardous Chemicals, Toxics and Reactives:

To the best of our knowledge, there are no chemicals at levels which require reporting



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under this statute.

US EPA List of Regulated Substances under the Risk Management Plan (RMP) Program:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

US EPA Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) under the Minimum Risk Exemption:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

U.S. - DEA List II or Essential Chemicals:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

U.S. - DEA - Exempt Chemical Mixtures - List 1 and 2:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

US DHS Chemical Facility Anti-Terrorism Standards (CFATS):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 311/312 Chemicals and RQs:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.



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Section 16. Other information

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DISCLAIMER OF RESPONSIBILITY

The information on this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume damage or expense arising out of or in any way responsibility and expressly disclaim liability for loss, connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS information may not be applicable.

The full text of the phrases appearing in section 3 is:

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H332 Harmful if inhaled.

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