

SAFETY DATA SHEET

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

1.1 Product identifiers

Product name Barium Oxide

CAS number 1304-28-5

Synonyms None

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 toxicity - Oral Category 4

Acute toxicity - Inhalation (Gases) Category 4

Acute toxicity - Inhalation (Dusts/Mists) Category 4

Skin corrosion/irritation Category 1 Sub-category A

Specific target organ toxicity (single exposure) Category 3

Specific target organ toxicity (repeated exposure) Category 2

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard statements

Harmful if swallowed
Harmful if inhaled
Causes severe skin burns and eye damage
May cause respiratory irritation
May cause damage to organs through prolonged or repeated exposure

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.
Wear protective gloves/protective clothing/eye protection/face protection.
Do not breathe dust/fume/gas/mist/vapors/spray.
Response:
Immediately call a POISON CENTER or doctor.
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
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. Wash contaminated clothing before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor.
IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. 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

Reacts violently with water.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Barium Oxide, Anhydrous	-	1304-28-5	100%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice	Show this safety data sheet to the doctor in attendance. Immediate medical att
If inhaled	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention 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. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention.
In case of skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.
In case of eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
If swallowed	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.

4.3 Indication of any immediate medical attention and special treatment needed

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2 Specific hazards arising from the substance or mixture

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.

5.3 Special protective equipment and precautions for firefighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

5.4 Further information

Flash Point No data available.

Autoignition Temperature No data available.

Explosion limits

Upper No data available.

Lower No data available.

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

NFPA

Health	Flammability	Instability	Physical hazards
3	0	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid generation of dust. Do not breathe dust.

6.2 Environmental precautions

No information available.

6.3 Methods and materials for containment and cleaning up

Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labeled containers.

6.4 Reference to other sections

Refer to protective measures listed in Sections 7 and 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid breathing vapors or mists.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Protect from moisture. Store locked up. Store away from other materials.

Incompatibilities

Acids. Bases. Oxidizing agent.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

No components have an established occupational exposure limit.

8.2 Exposure controls

Appropriate engineering controls

Showers.
Eyewash stations.
Ventilation systems.

Personal protective equipment

Eye/face protection

Tight sealing safety goggles. Face protection shield.

Skin protection

Wear suitable gloves. Impervious gloves.

Body Protection

Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

Respiratory protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Control of environmental exposure

Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid breathing dust/fume/gas/mist/vapors/spray.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Powder solid
Appearance	White to yellowish
Odor	No data available
Odor Threshold	No data available
pH	No data available
Melting Point/Range	1918 °C / 3484.4 °F
Boiling Point/Range	2000 °C / 3632 °F
Evaporation Rate	No data available

Flammability (solid)	No data available
Flammability or explosive limit	
Upper	No data available
Lower	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Density	5.72
Solubility	No data available
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	No data available
Decomposition Temp	No data available
Viscosity	No data available
Molecular Formula	BaO
Molecular Weight	153.36
VOC Content(%)	No data available
Oxidizing properties	No data available

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

No information available.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Exposure to air or moisture over prolonged periods. Excessive heat.

10.5 Incompatible materials

Acids. Bases. Oxidizing agent.

10.6 Hazardous decomposition products

None known based on information supplied.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

No information available.

Skin corrosion/irritation

Specific test data for the substance or mixture is not available. Corrosive. (based on components). Causes burns.

Serious eye damage/eye irritation

Specific test data for the substance or mixture is not available. Causes serious eye damage. (based on components). Corrosive to the eyes and may cause severe damage including blindness.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

No information available.

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Reproductive toxicity

No information available.

Chronic effects

No information available.

11.2 Additional Information

No information available.

SECTION 12: Ecological information**12.1 Toxicity**

The environmental impact of this product has not been fully investigated.

12.2 Persistence and degradability

No information available.

12.3 Bio accumulative potential

Inherently biodegradable.

12.4 Mobility in soil

No information available.

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

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

SECTION 14: Transport information

DOT (US)

UN Number	UN1884
Proper Shipping name	Barium oxide
Hazard Class	6.1
Packaging Group	III

IMDG

UN Number	UN1884
Proper Shipping name	Barium oxide
Hazard Class	6.1
Packaging Group	III

IATA

UN Number	UN1884
Proper Shipping name	Barium oxide
Hazard Class	6.1
Packaging Group	III

SECTION 15: Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not listed/applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed/applicable.

SARA 304 Emergency release notification

Not listed/applicable.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed/applicable.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed/applicable.

SARA 311/312 Hazardous

See section 2 for hazard classifications.

SARA 313 (TRI reporting)

Not listed/applicable.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not listed/applicable.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not listed/applicable.

Safe Drinking Water Act

Not listed/applicable.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed/applicable.

US state regulations

US. Massachusetts RTK - Substance List

Not listed/applicable.

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

Not listed/applicable.

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

Not listed/applicable.

California Proposition 65

Not listed/applicable.

SECTION 16: Other information

Date of Issue: 6/9/2025

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.