

SAFETY DATA SHEET

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

1.1 Product identifiers

Product name	Barium Nitrate 65 g/L Solution
CAS number	10022-31-8
Synonyms	Barium salt, Barium Dinitrate, Nitrobarite

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

Identified uses	Industrial, Manufacturing, or Laboratory use
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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)

Oxidizing solids (Category 2)
Acute toxicity, Oral (Category 4)
Acute toxicity, Inhalation (Category 4)
Skin irritation
Eye irritation (Category 2A)

2.2 GHS Label elements, including precautionary statements

Pictogram**Signal Word**

Danger

Hazard statements

May intensify fire; oxidizer
 Harmful if swallowed or in contact with skin
 Causes mild skin irritation
 Causes serious eye irritation
 Keep/store away from clothing/combustible materials
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

Precaution statements

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 Keep/store away from clothing/other combustible materials
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area
 Take any precaution to avoid mixing with combustibles
 Wear protective gloves/protective clothing/eye protection/face protection

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for
 Call a POISON CENTER or doctor/physician if you feel unwell

Eyes IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing if eye irritation persists: Get medical

Ingestion IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
 Rinse mouth

Fire In case of fire: Use CO₂, dry chemical, or foam for extinction

Storage Store locked up

Disposal Dispose of contents/container to an approved waste disposal plant

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

None identified

SECTION 3: Composition/information on ingredients**3.1 Components**

Chemical name	Common name and synonyms	CAS number	Concentration
Barium nitrate	Barium salt, Barium Dinitrate, Nitrobarite	10022-31-8	>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. 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 plenty of water for at least 15 minutes. Immediate medical attention is required.
In case of eye contact	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
If swallowed	Do NOT induce vomiting. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed

None reasonably foreseeable

4.3 Indication of any immediate medical attention and special treatment needed

No information available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Substance is nonflammable; use agent most appropriate to extinguish surrounding fire. Water mist may be used to cool closed containers.

Unsuitable extinguishing media No information available

5.2 Specific hazards arising from the substance or mixture

Non-combustible. Oxidizer: Contact with combustible/organic material may cause fire. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition. May ignite combustibles (wood, paper, oil, clothing, etc.).

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 Nitrogen oxides (NOx)

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	2	OX

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

6.2 Environmental precautions

Should not be released into the environment. See section 12 for additional Ecological information.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Sweep up and shovel into suitable containers for disposal.

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. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance. Keep away from clothing and other combustible materials.

Hygiene measures

Handle in accordance with good industrial hygiene practices.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near

Incompatibilities

Organic materials. Acids. Bases. Acid anhydrides. Metals. Reducing agents. Strong reducing agents. Combustible material.

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 nitrate	TWA	0.5 mg/m ³

US. ACGIH Threshold Limit Values

Component	Type	Value
Barium nitrate	TWA	0.5 mg/m ³

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Barium nitrate	IDLH	50 mg/m ³
	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

Handle in accordance with good industrial hygiene and safety practice.

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	5.0-8.0 5% aq.sol. (20°C)
Melting Point/Range	592 °C / 1097.6 °F
Boiling Point/Range	No information available
Evaporation Rate	Not applicable
Flammability (solid)	No information available
Flammability or explosive limit	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	Not applicable
Density	No information available
Solubility	No information available
Partition coefficient; n-octanol/water	No information available
Autoignition Temp	No information available
Decomposition Temp	No information available
Viscosity	No information available
Molecular Formula	Ba N2 O6
Molecular Weight	261.34
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

Yes

10.2 Chemical stability

Oxidizer: Contact with combustible/organic material may cause fire.

10.3 Possibility of hazardous reactions

None under normal processing

10.4 Conditions to avoid

Avoid dust formation. Incompatible products. Excess heat. Combustible material.

10.5 Incompatible materials

Organic materials, Acids, Bases, Acid anhydrides, Metals, Reducing Agent, Strong reducing agents, Combustible material.

10.6 Hazardous decomposition products

Nitrogen oxides (NOx)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Barium nitrate	50-300 mg/kg	-	>1.1 mg/L - 243 min

Skin corrosion/irritation

Irritating to eyes

Serious eye damage/eye irritation

No information available

Respiratory or skin sensitization

No information available

Germ cell mutagenicity

No information available

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Barium nitrate	10022-31-8	Not listed	Not listed	Not listed	Not listed	Not listed
Water	7732-18-5	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.	UN1446
Proper Shipping Name	BARIUM NITRATE
Hazard Class	5.1
Subsidiary Hazard Class	6.1
Packing Group	II

IMDG

UN-no.	UN1446
Proper Shipping Name	BARIUM NITRATE
Hazard Class	5.1
Subsidiary Hazard Class	6.1
Packing Group	II

IATA

UN-no.	UN1446
Proper Shipping Name	BARIUM NITRATE
Hazard Class	5.1
Subsidiary Hazard Class	6.1
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)
Not applicable

CERCLA Hazardous Substance List (40 CFR 302.4)
Not applicable

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 full list of applicable hazards.

SARA 313 (TRI reporting)
Listed - Threshold Values: 1.0

Other federal regulations

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

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

Safe Drinking Water Act
No information available

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

US state regulations

US. Massachusetts RTK - Substance List
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

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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.