

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 07.24.2017

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Barium Nitrate

SECTION 1: Identification

Product identifier

Product name: Barium Nitrate

Product code: S25190B

Recommended use of the product and restriction on use

Relevant identified uses: Not determined or not applicable.

Uses advised against: Not determined or not applicable.

Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer:

Supplier:

AquaPhoenix Scientific

860 Gitts Run Road

Hanover

PA 17331

(717) 632-1291

Fisher Science Education

6771 Silver Crest Road

Nazareth

PA 18064

800 955-1177

Emergency telephone number:

United States

Emergency Telephone No.: 800-255-3924

SECTION 2: Hazard(s) identification

GHS classification:

Oxidizing solids, category 2

Acute toxicity (oral), category 4

Acute toxicity (inhalation), category 4

Eye irritation, category 2A

Label elements

Hazard pictograms:



Signal word: Danger

Hazard statements:

H271 May cause fire or explosion; strong oxidizer

H272 May intensify fire; oxidizer

H302 Harmful if swallowed

H332 Harmful if inhaled

H319 Causes serious eye irritation

Precautionary statements:

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking

P220 Keep/Store away from clothing/combustible materials

P221 Take any precaution to avoid mixing with combustibles

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

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P283 Wear fire/flammable resistant/retardant clothing
P264 Wash skin thoroughly after handling
P270 Do not eat, drink or smoke when using this product
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P271 Use only outdoors or in a well-ventilated area
P306+P360 If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes
P370+P378 In case of fire: Use agents recommended in section 5 for extinction
P371+P380+P375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion
P301+P330+P312 IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.
P304+P340+P312 If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing
P405 Store locked up
P501 Dispose of contents and container as instructed in Section 13

Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

| Identification | Name | Weight % |
|---------------------------|----------------|----------|
| CAS number: 10022-31-8 | Barium Nitrate | 100 |

Additional Information: None

SECTION 4: First aid measures

Description of first aid measures

General notes:

Not determined or not applicable.

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position
Maintain an unobstructed airway
Get medical advice/attention if you feel unwell
Move to fresh air
Call a POISON CONTROL CENTER or seek medical attention if you feel unwell

After skin contact:

Rinse affected area with soap and water
If symptoms develop or persist, seek medical attention

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes
If symptoms develop or persist, seek medical attention
Remove contact lens(es) if able to do so during rinsing
Seek medical attention if irritation persists or if concerned

After swallowing:

Rinse mouth thoroughly
Seek medical attention if irritation, discomfort, or vomiting persists
Call a POISON CONTROL CENTER or seek medical attention if you feel unwell

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Do not induce vomiting
Rinse mouth and then drink plenty of water

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Not determined or not applicable.

Delayed symptoms and effects:

Not determined or not applicable.

Immediate medical attention and special treatment

Specific treatment:

Not determined or not applicable.

Notes for the doctor:

Not determined or not applicable.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

Unsuitable extinguishing media:

Not determined or not applicable.

Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors
Will release oxygen when heated, intensifying a fire

Special protective equipment for firefighters:

Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

Special precautions:

Carbon monoxide and carbon dioxide may form upon combustion
Heating causes a rise in pressure, risk of bursting and combustion

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation
Ensure air handling systems are operational
Wear protective eye wear, gloves and clothing

Environmental precautions:

Should not be released into the environment
Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing
Sweep or scoop up solid material while minimizing dust generation
Dispose of contents / container in accordance with local regulations

Reference to other sections:

Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:

Use only with adequate ventilation.

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Avoid breathing dust.

Do not eat, drink, smoke or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

Keep container tightly sealed.

Keep container dry.

Store in a cool, well-ventilated area.

Store away from flammable and combustible materials (paper, wood).

Store away from reducing agents (zinc, alkaline metals, formic acid).

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

| Country (Legal Basis) | Substance | Identifier | Permissible concentration |
|-----------------------|----------------|------------|--|
| ACGIH | Barium Nitrate | 10022-31-8 | ACGIH TLV: 0.5 mg/m ³ as Ba |
| United States (OSHA) | Barium Nitrate | 10022-31-8 | OSHA PEL TWA value 0.5 mg/m ³ as Ba |

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls.

Biological monitoring may also be appropriate for some substances.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Personal protection equipment

Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

Select glove material impermeable and resistant to the substance.

Wear appropriate clothing to prevent any possibility of skin contact.

Respiratory protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

General hygienic measures:

Avoid contact with skin, eyes and clothing.

Wash hands before breaks and at the end of work.

Wash contaminated clothing before reuse.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

| | |
|------------|------------------|
| Appearance | White , crystals |
| Odor | Odorless |

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| | |
|--|--------------------------------|
| Odor threshold | Not available. |
| pH | 5.0 - 8.0, 5% Aqueous Solution |
| Melting point/freezing point | 592°C |
| Initial boiling point/range | Decomposes |
| Flash point (closed cup) | Not applicable. |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Not available. |
| Upper flammability/explosive limit | Not available. |
| Lower flammability/explosive limit | Not available. |
| Vapor pressure | Negligible |
| Vapor density | 9.0 |
| Density | Not available. |
| Relative density | 3.24 at 23°C |
| Solubilities | Moderate |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto/Self-ignition temperature | Not available. |
| Decomposition temperature | 592°C |
| Dynamic viscosity | Not available. |
| Kinematic viscosity | Not available. |
| Explosive properties | Not available. |
| Oxidizing properties | Not available. |

Other information

| | |
|-------------------------|--------|
| Molecular Weight | 261.34 |
|-------------------------|--------|

SECTION 10: Stability and reactivity

Reactivity:

Does not react under normal conditions of use and storage.

Chemical stability:

Stable under normal conditions of use and storage.

Possibility of hazardous reactions:

None under normal conditions of use and storage.

Conditions to avoid:

Dust generation.

Incompatible materials:

Reducing agents, acids, bases, aluminum, hydroxylamine, magnesium, phosphorus, zinc, esters, combustible and flammable materials, acid anhydrides, tin chloride.

Hazardous decomposition products:

Nitrogen oxides, barium oxide.

SECTION 11: Toxicological information

Acute toxicity

Assessment: Harmful if swallowed Harmful if inhaled

Product data: No data available.

Substance data:

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| Name | Route | Result |
|----------------|-------|-----------------------------|
| Barium Nitrate | oral | LD50 Oral - Rat - 355 mg/kg |

Skin corrosion/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Serious eye damage/irritation

Assessment: Causes serious eye irritation

Product data: No data available.

Substance data:

| Name | Result |
|----------------|--------------------------------|
| Barium Nitrate | Causes serious eye irritation. |

Respiratory or skin sensitization

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

International Agency for Research on Cancer (IARC): None of the ingredients are listed.

National Toxicology Program (NTP): None of the ingredients are listed.

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Information on likely routes of exposure: No data available.

Symptoms related to the physical, chemical and toxicological characteristics: No data available.

Other information: No data available.

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SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Chronic (long-term) toxicity

Product data: No data available.

Substance data: No data available.

Persistence and degradability

Product data: No data available.

Substance data: No data available.

Bioaccumulative potential

Product data: No data available.

Substance data: No data available.

Mobility in soil

Product data: No data available.

Substance data: No data available.

Other adverse effects: No data available.


SECTION 13: Disposal considerations

Disposal methods:


It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

SECTION 14: Transport information

United States Transportation of dangerous goods (49 CFR DOT)

| | |
|-------------------------------|---|
| UN number | UN 1446 |
| UN proper shipping name | Barium Nitrate |
| UN transport hazard class(es) | 5.1  |
| Packing group | II |
| Environmental hazards | None |
| Special precautions for user | None |

International Maritime Dangerous Goods (IMDG)

| | |
|-------------------------------|---|
| UN number | UN 1446 |
| UN proper shipping name | Barium Nitrate |
| UN transport hazard class(es) | 5.1  |
| Packing group | II |
| Environmental hazards | None |
| Special precautions for user | None |

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)


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| | |
|--------------------------------------|---|
| UN number | UN 1446 |
| UN proper shipping name | Barium Nitrate |
| UN transport hazard class(es) | 5.1  |
| Packing group | II |
| Environmental hazards | None |
| Special precautions for user | None |

| Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | |
|---|------|
| Bulk Name | None |
| Ship type | None |
| Pollution category | None |

SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA):

| | | |
|------------|----------------|--------|
| 10022-31-8 | Barium Nitrate | Listed |
|------------|----------------|--------|

Significant New Use Rule (TSCA Section 5): Not determined.

Export notification under TSCA Section 12(b): Not determined.

SARA Section 311/312 hazards:

| | | | | |
|-------|---------|------|----------|----------|
| Acute | Chronic | Fire | Pressure | Reactive |
| Yes | No | No | No | Yes |

SARA Section 302 extremely hazardous substances: Not determined.

SARA Section 313 toxic chemicals:

| | | |
|------------|----------------|------------|
| 10022-31-8 | Barium Nitrate | Not Listed |
|------------|----------------|------------|

CERCLA: Not determined.

RCRA: Not determined.

Section 112(r) of the Clean Air Act (CAA): Not determined.

Massachusetts Right to Know:

| | | |
|------------|----------------|------------|
| 10022-31-8 | Barium Nitrate | Not Listed |
|------------|----------------|------------|

New Jersey Right to Know:

| | | |
|------------|----------------|------------|
| 10022-31-8 | Barium Nitrate | Not Listed |
|------------|----------------|------------|

New York Right to Know:

| | | |
|------------|----------------|------------|
| 10022-31-8 | Barium Nitrate | Not Listed |
|------------|----------------|------------|

Pennsylvania Right to Know:

| | | |
|------------|----------------|------------|
| 10022-31-8 | Barium Nitrate | Not Listed |
|------------|----------------|------------|

California Proposition 65: None of the ingredients are listed.

SECTION 16: Other information

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Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered 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 materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 2-1-1-ox

HMIS: 2-1-1

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End of Safety Data Sheet