

**Safety Data Sheet**

according to 29CFR1910/1200 and GHS Rev. 3

**Initial preparation date:** : 12.19.2014**Bismuth Nitrate****SECTION 1: Identification of the substance/mixture and of the supplier****Product name:** Bismuth Nitrate**Manufacturer/Supplier Article number:** S25198**Recommended uses of the product and restrictions on use:** Laboratory Chemicals**Manufacturer Details:**

AquaPhoenix Scientific  
860 Gitts Run Road,  
Hanover, PA 17331  
(717) 632-1291

**Supplier Details:**

Fisher Science Education  
6771 Silver Crest Road, Nazareth, PA 18064  
800 955-1177

**Emergency telephone number:**

Emergency Telephone No.: 800-255-3924

**SECTION 2: Hazards identification****Classification of the substance or mixture:****Oxidizing****Irritant**

Ox. liq. 2.

Skin irrit. 2.

Specific Target. Organ tox. 3.

Eye irrit. 2A.

**Signal word:** Danger**Hazard statements:**

May intensify fire; oxidizer.

Causes serious eye irritation.

Causes skin irritation.

May cause respiratory irritation.

**Precautionary statements:**

If medical advice is needed have product container or label at hand.

Keep out of reach of children.

Read label before use.

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

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

Take any precaution to avoid mixing with combustibles.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

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Wash skin thoroughly after handling.

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. Continue rinsing.

In case of fire, use agents recommended in section 5 for extinction.

Specific treatment (see supplemental first aid instructions on this label).

If eye irritation persists get medical advice/attention.

IF ON SKIN: Wash with soap and water.

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.

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash before reuse.

Store in a well ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents and container as instructed in Section 13.

**Other Non-GHS Classification:** None**SECTION 3: Composition/information on ingredients****Ingredients:**

Ingredients:		
CAS 10035-06-0	Bismuth Nitrate Pentahydrate	100 %
Percentages are by weight		

**SECTION 4: First aid measures****Description of first aid measures****After inhalation:**

Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Loosen clothing as necessary and position individual in a comfortable position. Seek medical attention immediately. Do not use mouth to mouth resuscitation if inhaled or ingested. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

**After skin contact:**

Wash off with soap and plenty of water. Seek medical attention immediately. Wash affected area with soap and water. Flush skin for 15 minutes.

**After eye contact:**

Protect unexposed eye. If able remove contact lenses while rinsing. Seek medical attention immediately. Occasionally lifting the upper and lower eyelids. Rinse or flush exposed eye gently using water for 15-20 minutes, occasionally lifting the upper and lower eyelids.

**After swallowing:**

Never give anything by mouth to an unconscious person. Rinse mouth thoroughly. Do not induce vomiting. Seek medical attention immediately. Dilute with milk and water.

**Most important symptoms and effects, both acute and delayed:**

Irritation. Nausea. Headache. Shortness of breath.

**Indication of any immediate medical attention and special treatment needed:**

If seeking medical attention, provide SDS document to physician. Notes to Physician: For methemoglobinemia,

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administer oxygen alone or with Methylene Blue depending on the methemoglobin concentration in the blood.

**SECTION 5: Firefighting measures****Extinguishing media****Suitable extinguishing agents:**

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

**Unsuitable extinguishing agents:** None**Special hazards arising from the substance or mixture:**

Nature of decomposition products is not known.

**Advice for firefighters:****Protective equipment:**

Wear protective gloves, protective clothing, and eye protection. Use NIOSH-approved breathing equipment.

**Additional information (precautions):**

Fire Fighting Instructions. Use water spray to cool unopened containers. Use spark-proof tools and explosion-proof equipment. Use normal procedures. Use protective clothing. Use NIOSH approved breathing equipment.

**SECTION 6: Accidental release measures****Personal precautions, protective equipment and emergency procedures:**

Avoid contact with eyes, skin, and clothing. Use spark-proof tools and explosion-proof equipment. Ensure adequate ventilation.

**Environmental precautions:**

Prevent from reaching drains, sewer, or waterway. Collect contaminated soil for characterization per Section 13.

**Methods and material for containment and cleaning up:**

Sweep up and containerize for disposal. Avoid generating dust. Always obey local regulations. Contain spillage and then collect with an electrically protected vacuum cleaner or by wet-brushing. Keep in suitable closed containers for disposal. Collect contaminated soil for characterization per Section 13. Consult federal, state, provincial, and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product. If necessary use trained response staff or contractor.

**Reference to other sections:** None**SECTION 7: Handling and storage****Precautions for safe handling:**

Avoid contact with skin, eyes and clothing. Use only in well ventilated areas. Avoid generation of dust or fine particulate. Wash hands after handling. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Do not eat, drink, smoke, or use personal products when handling chemical substances.

**Conditions for safe storage, including any incompatibilities:**

Keep container tightly closed in a cool, dry, well-ventilated area. Avoid storage on wood floors. Keep away from food, beverages, and feed sources. Keep product and empty container away from heat and sources of ignition. Store protected from moisture.

**SECTION 8: Exposure controls/personal protection**

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**Bismuth Nitrate****Control parameters:**

**Appropriate engineering controls:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or dusts (total/respirable) below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment.

**Respiratory protection:**

When air-purifying respirators are appropriate select full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. Use NIOSH-approved breathing equipment. Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable.

**Protection of skin:**

Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash off with soap and plenty of water. Wash hands before breaks and immediately after handling the product. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation being used/handled. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

**Eye protection:**

Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses with side shields or goggles.

**General hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.

**SECTION 9: Physical and chemical properties**

<b>Appearance (physical state, color):</b>	White crystals	<b>Explosion limit lower:</b>	Non Explosive
		<b>Explosion limit upper:</b>	Non Explosive
<b>Odor:</b>	Odorless	<b>Vapor pressure at 20°C:</b>	Not applicable
<b>Odor threshold:</b>	Not applicable	<b>Vapor density:</b>	Not applicable
<b>pH-value:</b>	Not applicable	<b>Relative density:</b>	Not applicable
<b>Melting/Freezing point:</b>	30°C	<b>Solubilities:</b>	None
<b>Boiling point/Boiling range:</b>	Not applicable	<b>Partition coefficient (n-octanol/water):</b>	Not applicable
<b>Flash point (closed cup):</b>	Not applicable	<b>Auto/Self-ignition temperature:</b>	Not applicable
<b>Evaporation rate:</b>	Not applicable	<b>Decomposition temperature:</b>	Not available
<b>Flammability (solid, gaseous):</b>	Not available	<b>Viscosity:</b>	a. Kinematic: Not applicable b. Dynamic: Not applicable
<b>Density at 20°C:</b>	Not applicable		

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Stable under normal conditions.

**Possible hazardous reactions:** None**Conditions to avoid:**

Avoid moisture. High temperatures. Dust generation.

**Incompatible materials:**

Organic materials. Strong reducing agents. Powdered metals. Strong acids. Strong bases. Combustible materials.

**Hazardous decomposition products:**

Nitrogen oxides. Bismuth oxide.

**SECTION 11: Toxicological information****Acute Toxicity:** No additional information.**Chronic Toxicity:** No additional information.**Skin corrosion/irritation:** No additional information.**Serious eye damage/irritation:** No additional information.**Respiratory or skin sensitization:** No additional information.**Carcinogenicity:****Bismuth nitrate pentahydrate, 10035-06-0:** Not listed as a carcinogen (ACGIH, IARC, NTP, or CA Prop 65).**Germ cell mutagenicity:** No additional information.**Reproductive Toxicity:** No additional information.**STOT-single and repeated exposure:** No additional information.**Additional toxicological information:**

No additional information.

**SECTION 12: Ecological information****Ecotoxicity:** No additional information.**Persistence and degradability:**

Readily degradable in the environment.

**Bioaccumulative potential:** No additional information.**Mobility in soil:** No additional information.**Other adverse effects:** No additional information.**SECTION 13: Disposal considerations****Waste disposal recommendations:**

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Dilute with water and flush to sewer. Consult federal, state, provincial, and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product.

**SECTION 14: Transport information**

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ADR, ADN, DOT, IMDG, IATA

1477

**Limited Quantity Exception:**

None

**Bulk:****RQ (if applicable):** None**Proper shipping Name:** NITRATES,  
INORGANIC, N.O.S.**Hazard Class:** 5**Packing Group:** II.**Marine Pollutant (if applicable):** No  
additional information.**Comments:** None**Non Bulk:****RQ (if applicable):** None**Proper shipping Name:** NITRATES,  
INORGANIC, N.O.S.**Hazard Class:** 5**Packing Group:** II.**Marine Pollutant (if applicable):** No  
additional information.**Comments:** None**SECTION 15: Regulatory information****United States (USA)****SARA Section 311/312 (Specific toxic chemical listings):**

Acute, Reactive

**SARA Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

**RCRA (hazardous waste code):**

None of the ingredients are listed.

**TSCA (Toxic Substances Control Act) :**

All ingredients are listed.

**CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):**

None of the ingredients are listed.

**Proposition 65 (California):****Chemicals known to cause cancer:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

**Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

**Canada****Canadian Domestic Substances List (DSL) :**

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All ingredients are listed.

**SECTION 16: Other information**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

**NFPA:** 2-0-2**HMIS:** 2-0-2**GHS Full Text Phrases:** None**Abbreviations and Acronyms:**

IMDG	International Maritime Code for Dangerous Goods.
PNEC.	Predicted No-Effect Concentration (REACH).
CFR	Code of Federal Regulations (USA)
SARA	Superfund Amendments and Reauthorization Act (USA).
RCRA.	Resource Conservation and Recovery Act (USA).
TSCA.	Toxic Substances Control Act (USA).
NPRI	National Pollutant Release Inventory (Canada).
DOT	US Department of Transportation.
IATA	International Air Transport Association.
GHS	Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstracts Service (division of the American Chemical Society).
NFPA	National Fire Protection Association (USA).
HMIS	Hazardous Materials Identification System (USA).
WHMIS	Workplace Hazardous Materials Information System (Canada).
DNEL	Derived No-Effect Level (REACH).