

Section 1 Chemical Product and Company Identification

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For laboratory and industrial use only.
Not for drug, food or household use.

Product	BISMUTH NITRATE, PENTAHYDRATE
Synonyms	Bismuth(III) Nitrate, 5-Hydrate / Bismuth Trinitrate / Bismuth Nitrate

Section 2 Hazards Identification

Signal word: DANGER
Pictograms: GHS03 / GHS07
Target organs: Kidneys



GHS Classification:
Oxidizing solid (Category 2)
Skin irritation (Category 2)
Eye irritation (Category 2A)
STOT-SE (Category 3)

GHS Label information: Hazard statement:

H272: May intensify fire; oxidizer.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation.

Precautionary statement:

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P220: Keep away from clothing/incompatible/combustible materials.
P221: Take any precaution to avoid mixing with combustibles and incompatible materials.
P261: Avoid breathing dust.
P264: Wash hands thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352: IF ON SKIN: Wash with plenty of water and soap.
P332+P313: If skin irritation occurs: Get medical attention.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical attention.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312: Call a POISON CENTER or doctor if you feel unwell.
P362+P364: Take off contaminated clothing and wash it before reuse.
P370+P378: In case of fire: Use water to extinguish.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P405: Store locked up.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known
Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Bismuth nitrate	10035-06-0	100%	215-136-8

Section 4 First Aid Measures

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES SERIOUS EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. CAUSES SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Use water. Do not use dry chemicals or foams. CO₂ or Halon® may provide limited control.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Recover for reuse if not contaminated. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from ignition sources.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Bismuth nitrate	Not established	Not established	Not established

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Solid. White crystalline powder	Evaporation rate (= 1): Data not available	Partition coefficient: Data not available
Odor: No odor	Flammability (solid/gas): Data not available	Auto-ignition temperature: Data not available
Odor threshold: Data not available	Explosion limits: Lower / Upper: Data not available	Decomposition temperature: Data not available
pH: Data not available	Vapor pressure (mm Hg): Negligible	Viscosity: Data not available
Melting / Freezing point: 30°C (86°F)	Vapor density (Air = 1): Data not available	Molecular formula: Bi(NO ₃) ₃ ·5H ₂ O
Boiling point: 80°C (176°F)	Relative density (Specific gravity): 2.830	Molecular weight: 485.1
Flash point: Data not available	Solubility(ies): Decomposes in water	

Section 10 Stability & Reactivity

Chemical stability: Stable

Hazardous polymerization: Will not occur.

Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition.

Incompatible materials: Combustible materials, strong reducing agents, acids, organic materials, finely powdered metals.

Hazardous decomposition products: Carbon oxides, nitrogen oxides, bismuth oxides.

Section 11 Toxicological Information

Acute toxicity: Data not available

Skin corrosion/irritation: Data not available

Serious eye damage/irritation: Data not available

Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenicity: Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Reproductive toxicity: Data not available

STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory effects.

STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: Inhalation may cause irritation to mucous membranes and upper respiratory tract.

Ingestion: Ingestion may cause decreased appetite, weakness, rheumatic pain, diarrhea, fever, metal line on gums.

Skin: Contact causes irritation.

Eyes: Contact causes irritation.

Signs and symptoms of exposure: To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards.

Additional information: RTECS #: EB2984430

Section 12 Ecological Information

Toxicity to fish: No data available

Toxicity to daphnia and other aquatic invertebrates: No data available

Toxicity to algae: No data available

Persistence and degradability: No data available

Bioaccumulative potential: No data available

Mobility in soil: No data available

PBT and vPvB assessment: No data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: UN1477 **Shipping name:** Nitrates, inorganic, n.o.s., (Bismuth nitrate)

Hazard class: 5.1 **Packing group:** III **Reportable Quantity:** No **Marine pollutant:** No

Exceptions: Limited quantity equal to or less than 5 Kg **2016 ERG Guide #** 140

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Bismuth nitrate	Listed	Not listed	D001	Not listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.