



Safety Data Sheet

For Compliance with OSHA 29 CFR 1910.1200 and ANSI Z400.1-1998

Bismuth Subnitrate USP

50-1145

Section 1: Identification

Product Name Bismuth Subnitrate USP

Commercial Name Not available.

Product Use Not available.

Restrictions On Use Not available.

Product Code 50-1145

Company PCCA
9901 South Wilcrest
Houston, TX 77099
Phone: 1-800-331-2498
Fax: 1-800-874-5760

In case of emergency contact:

CHEMTREC (24hr) 1-800-424-9300

Section 2: Hazard(s) Identification

OSHA Haz Com: Oxidizing solids. Category 2 Skin Corrosion/Irritation Category 2 Serious Eye Damage/Eye Irritation

CFR 1910.1200 Category 2 Specific target organ toxicity (single exposure) Target Organs - Respiratory system Category 3

Signal Word DANGER

Hazard Statement(s) May intensify fire;oxidizer. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.

Pictogram(s) or Symbol(s)



Precautionary Statement(s):

Prevention

Wash face, hands and any exposed skin thoroughly after handling Wear protective gloves/protective clothing/eye protection/face protection Avoid breathing dust/fume/gas/mist/vapors/spray Use only outdoors or in a well-ventilated area Keep away from heat/sparks/open flames/hot surfaces. - No smoking Keep/Store away from clothing/ other combustible materials Take any precaution to avoid mixing with combustibles

Response

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 ON SKIN: Wash with plenty of soap and water If skin irritation occurs: Get medical advice/attention Take off contaminated clothing and wash before reuse 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 advice/attention In case of fire: Use CO2, dry chemical, or foam for extinction

Storage

Store in a well-ventilated place. Keep container tightly closed Store locked up

Disposal

Dispose of contents/container to an approved waste disposal plant

Section 3: Composition/Information on Ingredients

Substance/Mixture Substance

Components Bismuth Subnitrate

% By Weight 100

CAS# 1304-85-4

Molecular Weight 1461.98 g/mole

Chemical Formula Bi5O(OH)9(NO3)4

Synonym(s) Bismuth oxynitrate, bismuth nitrate oxide

Mixtures

Name	CAS#	% by Weight	TLV/PEL	LC50/LD50
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Section 4: First-Aid Measures

Inhalation	Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.
Symptoms/Effects	
Acute	Small doses may cause weakness, general depression, headache and metal impairment. Larger doses may cause dizziness, abdominal cramps, vomiting, bloody diarrhea, convulsions, and collapse.
Delayed	Small doses may cause weakness, general depression, headache and metal impairment. Larger doses may cause dizziness, abdominal cramps, vomiting, bloody diarrhea, convulsions, and collapse.
Immediate Medical Attention	Treat symptomatically.

Section 5: Fire-Fighting Measures**Suitable Extinguishing Media**

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

Unsuitable Extinguishing Media

Not available.

Products of Combustion

Heavy metal oxides. Nitrogen oxides (NOx). May intensify fire; oxidizer. Oxidizer: Contact with combustible/organic material may cause fire. May ignite combustibles (wood, paper, oil, clothing, etc.).

Firefighters Special Equipment and Precautions

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation.
Environmental Precautions: Should not be released into the environment. See Section 12 for additional Ecological Information.
Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system. Methods for Containment and Clean Up: Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

Section 7: Handling and Storage

Handling: Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid ingestion and inhalation. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Keep away from clothing and other combustible materials. **Storage:** Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near combustible materials. **Incompatible Materials.** Reducing Agent. Combustible material. Strong reducing agents.

Section 8: Exposure Controls/Personal Protection

Exposure Limits	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
Engineering Controls	None under normal use conditions. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas. Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
Personal Protection	Eye/face Protection: Tight sealing safety goggles. Skin and body protection: Wear appropriate protective gloves and clothing to prevent skin exposure. Respiratory Protection: No protective equipment is needed under normal use conditions. Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice.

Section 9: Physical and Chemical Properties

Appearance	White powder. Solid.		
Odor	Odorless.		
Odor Threshold	Not available.		
Melting Point	500 °C / 932 °F	pH	Not available.
Freezing Point	Not available.	Vapor Pressure	Not applicable.
Boiling Point/Range	Not available.	Vapor Density	Not available.
Decomposition temperature	Not available.	Viscosity	Not available.
Partition Coefficient: n-octanol/water	Not available.	Evaporation Rate	Not available.
Flash Point	Not available	Autoignition temperature	Not available.
Flammability	Not available	Flammability or Explosive Limits:	
		Lower	Not available.
		Upper	Not-flammable but ocntact with combustible material
Solubility(ies)	Insoluble in water		
Other	Molecular Formula Bi5 H9 N4 O22 Molecular Weight 1461.99		

Section 10: Stability and Reactivity

Reactivity	No decomposition is used and stored according to specifications.
Chemical Stability	Stable under normal conditions. Oxidizer: Contact with combustible/organic material may cause fire.
Hazardous Polymerization	Hazardous polymerization does not occur
Conditions to Avoid	Incompatible products. Excess heat. Avoid dust formation. Combustible material.
Incompatible Materials	Strong reducing agents, organics, falmmbables and powdered metals. Alkaline bicarbonates, soluble iodides, gallic acid, calomel, salicylic acid, tannin, sulfur.
Hazardous Decomposition Products	Heavy metal oxides, Nitrogen oxides (NOx)

Section 11: Toxicological Information

RTECS	Not available
Acute Toxicity	
LC50 Inhalation: LC50 > 5.07 mg/L (Rat) 4 h	
Skin Corrosion/Irritation	
Irritating to eyes, respiratory system and skin	
Serious Eye Damage/Irritation	
Irritating to eyes, respiratory system and skin	
Respiratory or Skin Sensitization	
Irritating to eyes, respiratory system and skin	
Germ Cell Mutagenicity	
Not available	
Carcinogenicity	
Not available	
Reproductive Toxicity	
Not available	
Routes of Entry	
Inhalation.	

Symptoms Related to Exposure

Gastrointestinal disturbance, anorexia, headache, jaundice, absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer. A unique encephalopathy occurs in colostomy and ileostomy patients using bismuth subnitrate, bismuth subgallate, and tripotassium-dicitrate-bismuthate for control of fecal odor and consistency. Symptoms include progressive mental confusion, irregular myoclonic jerks, a distinctive pattern of disordered, gait, and a variable degree of dysarthria. The severity of the disorder appeared to be independent of dose and duration of therapy and was fatal to patients who continued the use of the bismuth compounds. Full recovery was rapid in those patients in whom therapy was discontinued. Symptoms of chronic bismuth toxicity in humans consists of decreased appetite, weakness, rheumatic pain, diarrhea, fever, metal line on gums, foul breath, gingivitis, and dermatitis. Jaundice and conjunctival hemorrhage are rare, but have been reported. Bismuth nephropathy with proteinuria may occur. The kidney is the site of highest concentration with the liver being considerably lower. Bismuth does pass into the amniotic fluid and into the fetus. To the best of our knowledge the acute and chronic toxicity of this substance is not fully known

Potential Health Effects

Not available

Target Organ(s)

Not available

Section 12: Ecological Information**Ecotoxicity**

Do not allow material to be released to the environment without proper governmental permits. Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

Persistence and Degradability

Insoluble in water May persist

Bioaccumulative Potential

Not available

Mobility in Soil

Is not likely mobile in the environment due its low water solubility.

Other Adverse Effects

Not available.

Section 13: Disposal Considerations**Waste Disposal**

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.

Disposal of Container

Disposal must be made according to official regulations.

Other Considerations

Not available

Section 14: Transport Information**DOT Classification**

UN-No UN1477 Proper Shipping Name NITRATES, INORGANIC, N.O.S. Technical Name Bismuth hydroxide nitrate oxide (Bi5(OH)9(NO3)4O) Hazard Class 5.1 Packing Group II

Section 15: Regulatory Information**Regulations**

SARA 313 Not applicable SARA 311/312 Hazard Categories See section 2 for more information CWA (Clean Water Act) Not applicable Clean Air Act Not applicable OSHA - Occupational Safety and Health Administration Not applicable CERCLA Not applicable California Proposition 65 This product does not contain any Proposition 65 chemicals. U.S. Department of Transportation Reportable Quantity (RQ): N DOT Marine Pollutant N DOT Severe Marine Pollutant N U.S. Department of Homeland Security This product does not contain any DHS chemicals



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Other

Not available

Section 16: Other Information

The above information is accurate to the best of our knowledge. However, since data, safety standards and government regulation are subject to change and the conditions of handling and use, or misuse are beyond our control. NOAH MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR RELIANCE THEREON. User should satisfy himself that he has all current data relevant to his particular use.