SAFETY DATA SHEET

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SECTION 1 PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: **Bismuth (III) Nitrate Hydrate**

PRODUCT NUMBER: 1249-1

CAS NUMBER: 10361-44-1

SYNONYMS: Bismuth trinitrate hydrate

MANUFACTURER:

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SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION OF SUBSTANCE OR MIXTURE

Oxidizing liquids:	Category – 2 / 3
Skin corrosion / irritation	Category – 2
Serious eye damage / irritation.	Category – 1
Specific target organ toxicity, Respiratory irritation.	Category – 3

Pictogram



Signal Word **Danger**

Hazard Statements

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

Precautionary Phrases

P210	Keep away from heat.
P220	Keep/Store away from clothing/combustible materials.
P221	Take any precaution to avoid mixing with combustibles.
P261	Avoid breathing dust/fume/gas/mist/vapor/spray.
P264	Wash skin 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 soap and water.

SECTION 2 HAZARDS IDENTIFICATION (Cont.)

P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P370+P378	In case of fire: Use dry sand, dry chemical, or alcohol resistant foam for extinction.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Formula: $Bi(NO_3)\bullet XH_2O$

Molecular Weight: 394.99 (anhy.)

CHEMICAL NAME	CAS#	%
Bismuth (III) Nitrate Hydrate	10361-44-1	100

SECTION 4 FIRST AID MEASURES

EYE EXPOSURE: Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.
SKIN EXPOSURE: Wash affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.
INHALATION: Remove to fresh air and keep at rest. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases, seek immediate medical assistance.
INGESTION: Seek medical assistance immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

SECTION 5 FIREFIGHTING MEASURES

FLASH POINT: Not available
AUTO IGNITION TEMPERATURE: Not available
EXPLOSION LIMITS: Not available
EXTINGUISHING MEDIUM: Carbon dioxide, extinguishing powder, or water spray. Fight large fires with water spray or alcohol resistant foam.
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS: Nitrogen oxides and bismuth oxides.

SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Wear all appropriate equipment when using this material. Ensure adequate ventilation. Avoid the formation of dust. Avoid breathing vapors, mist, gas, or dust.
ENVIRONMENTAL PRECAUTIONS: Prevent spillage from entering drains or allowing to be released into the environment.
METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Pick up and arrange disposal without creating dust. Sweep up and keep in suitable, closed containers for disposal. Acts as an oxidizing agent on organic materials such as wood, paper, and fats. Keep away from combustible material.

SECTION 7 HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Wear appropriate personal protective equipment. Use with adequate ventilation. Avoid contact with skin and eyes. Avoid formation of dust. Handle under inert gas.

SECTION 7 HANDLING AND STORAGE (Cont.)

CONDITIONS FOR SAFE STORAGE: Store in cool, dry, and well-ventilated area. Store away from flammable substances, reducing agents, metal powders, water, moisture, acids, and organic materials. Store under dry inert gas. Hygroscopic. Protect from humidity and water.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

EXPOSURE CONTROLS: Contains no substances with occupational exposure limit values.
EYE PROTECTION: Wear chemical safety glasses or goggles and face shield.
SKIN PROTECTION: Wear nitrile or rubber gloves .11 mm thickness and an apron, or lab coat.
VENTILATION: Provide local exhaust, preferably mechanical.
RESPIRATOR: Use an approved respirator.
ADDITIONAL PROTECTION: Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

COLOR AND FORM: White solid
ODOR: None
MOLECULAR WEIGHT: 394.99 (anhy.)
BOILING POINT: 75-80° C
MELTING POINT: 30°C
SPECIFIC GRAVITY: 2.83
VAPOR DENSITY: No data available
SOLUBILITY IN WATER: Decomposes

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Hygroscope Oxidizer: Contact with combustible/organic material may cause fire.
HAZARDOUS POLYMERIZATION: Will not occur
CONDITIONS TO AVOID: Avoid moisture
INCOMPATIBILITY: Organic materials, strong reducing agents, strong acids, and powdered metals.
DECOMPOSITION PRODUCTS: Nitrogen oxides and bismuth oxides.

SECTION 11 TOXICOLOGICAL DATA

ACUTE TOXICITY: No data available
CARCINOGENIC EFFECTS: No components of this product present at levels greater than or equal to 0.1% is identified a carcinogen.
MUTAGENIC EFFECTS: Not available
TETRATOGENIC EFFECTS: Not available
RTECS: Not available

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

SECTION 12 ECOLOGICAL DATA

No data available

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in according to local, state, and federal regulations.

SECTION 14 TRANSPORTATION DATA

UN1477
Nitrates, inorganic, n.o.s.
(Bismuth (III) nitrate pentahydrate)
Class 5.1
PG II

Marine Pollutant: No

SECTION 15 REGULATORY INFORMATION

TSCA: Not listed in the TSCA inventory
SARA 302/304: Not listed
SARA 311/312: Reactivity Hazard
SARA (TITLE 313): Not listed
CALIFORNIA PROP. 65: Not Listed

SECTION 16 OTHER INFORMATION

HMIS CLASSIFICATION:
Health: 2 Fire: 0 Reactivity Hazard: 1
NFPA RATING:
Health: 2 Flammability: 0 Reactivity Hazard: 1 Special: OX

CAS #: Chemical Abstracts Service Number
(anhy.): anhydrous, which means "without water"
UN: United Nations
n.o.s: Not Otherwise Specified
PG: Packing Group
TSCA: Toxic Substances Control Act
SARA: Superfund Amendments and Reauthorization Act
HMIS: Hazardous Materials Identification System
NFPA: National Fire Protection Association

DISCLAIMER: The information herein is believed to be accurate and reliable as of the date compiled. However, ProChem, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information in this document or any use of the product based on the information.

DATE PREVIOUSLY REVISED: 02/25
DATE REVISED: **08/26**
REVISED SUMMARY: Removed fax number. Updated section # 2 categories and section # 16 abbreviations. All other details in this document about this product remained unchanged. Revisions made by EHS 08/07/2026

EHS/SDS DEPT.