



# Safety Data Sheet

## Bismuth

### SECTION 1: PRODUCT DESCRIPTION

#### PRODUCT IDENTIFIER

Product form: Solid  
Product Name: Bismuth Metal (bars, balls, pieces)  
Formula: Bi

#### SUPPLIER

**NATHAN TROTTER & COMPANY**  
**241 W. STEWART HUSTON DRIVE**  
**COATESVILLE, PA 19320**  
**PH. 610-524-1440**  
**FX. 610-524-2496**

#### INTENDED USE OF PRODUCT

Use: Industrial; professional use only

#### EMERGENCY TELEPHONE NUMBER

CHEMTREC 24 HR Emergency number: 1-800-424-9300  
INTERNATIONAL CHEMTREC call: 1-703-527-3887

### SECTION 2: HAZARD IDENTIFICATION

GHS CLASSIFICATION: NOT CLASSIFIED AS HAZARDOUS

Signal Word:

HAZARD STATEMENTS: N/A

**N/A**

PRECAUTIONARY STATEMENTS: N/A

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### SUBSTANCE

Name	Product Identifier	%	Classification (GHS-US)
Bismuth Metal	7440-69-9	100	N/A

#### MIXTURE

Precautionary Statements: Not Applicable

### SECTION 4: FIRST AID MEASURES

**General First-aid Measures:** Under normal handling and use, exposure to solid forms of this material present few health hazards. Subsequent operations such as grinding, melting or welding may produce hazardous dust or fumes which can be inhaled or come in contact with the skin or eyes.

**INHALATION:** Remove to fresh air, keep warm and quiet, give oxygen if breathing is difficult. Seek medical attention if symptoms persist.

**INGESTION:** Rinse mouth with water. Do not induce vomiting. Seek medical attention if symptoms persist. Never induce vomiting or give anything by mouth to an unconscious person.

**SKIN:** After contact with skin, wash immediately with plenty of water

**EYES:** Flush eyes with lukewarm water, including under upper and lower eyelids, for at least 15 minutes. Seek medical attention.

## SECTION 5: FIRE FIGHTING PROCEDURES

**Extinguishing Media:** Use suitable extinguishing agent for surrounding materials and type of fire.

**Unsuitable Extinguishing Media:** No information available.

**Specific Hazards Arising from the Material:** This product does not present fire or explosion hazards as shipped. Fine dust from processing is a weak to moderate fire hazard if allowed to accumulate and subjected to an ignition source. When heated, fumes of bismuth oxide may be released.

**Special Protective Equipment and Precautions for Firefighters:** Full face, self-contained breathing apparatus and full protective clothing when necessary.

## SECTION 6: SPILL OR LEAK MEASURES/PROCEDURES

**Personal Precautions, Protective Equipment, and Emergency Procedures:** Wear appropriate respiratory and protective equipment specified in section 8. Avoid creating dusts. Avoid breathing dust or fume. Isolate spill area and provide ventilation.

**Methods and Materials for Containment and Cleaning Up:** For larger pieces - pick up mechanically. For chips or dust - vacuum using a HEPA filter. Place in properly labeled closed containers. Avoid creating dusts. Do not use compressed air.

**Environmental Precautions:** Do not allow to enter drains or to be released to the environment.

## SECTION 7: HANDLING AND STORAGE

**Precautions for Safe Handling:** Handle in a well-ventilated area. Avoid creating dust. Avoid exposure to high temperature. Avoid breathing dust or fumes. Avoid contact with skin and eyes. Wash thoroughly before eating or smoking. See section 8 for information on personal protection equipment.

**Conditions for Safe Storage, Including Any Incompatibilities:** Store in a sealed container. Store in a cool, dry area. Do not store together with oxidizers, acids or halogens. See section 10 for more information on incompatible materials.

## SECTION 8: PROTECTION INFORMATION

**CHEMICAL NAME:** Bismuth, METAL

<u>TWA</u>	<u>ACGIH</u>	<u>STEL</u>	<u>TWA</u>	<u>OSHA PEL</u>	<u>STEL</u>
N/A		N/A	N/A		N/A

**CONTROL PARAMETERS/ ENGINEERING MEASURES:** Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.

**PERSONAL PROTECTIVE EQUIPMENT (PPE):**

**RESPIRATORY PROTECTION:** When potential exposures are above the occupational limits, approved respirators must be used.

**EYE PROTECTION:** Safety glasses

**SKIN PROTECTION:** Wear impermeable gloves, protective clothing as necessary.

## SECTION 9: PHYSICAL DATA

**FORMULA:** Bi

**MOLECULAR WEIGHT:** 829.4 g/mol

**APPEARANCE:** Silver gray, metallic

**ODOR:** Odorless

**PHYSICAL STATE:** Solid

**pH:** No data available

**MELTING POINT:** 520 °F (271°C)

**BOILING POINT:** 2840°F (1560°C)

**FREEZING POINT:** No data available

**FLAMMABILITY:** No data Available

**FLASH POINT:** No data available

**AUTO IGNITION TEMPERATURE:** No data available

**DECOMPOSITION TEMPERATURE:** No data available

**VAPOR PRESSURE :** 1mm Hg at 1870°F (1021°C)

**SPECIFIC GRAVITY:** 9.8 g/cc

**Insoluble in water**

## SECTION 10: REACTIVITY DATA

**REACTIVITY:** No data.

**CHEMICAL STABILITY:** Stable under recommended handling and storage conditions. (see section 7)

**POSSIBILITY OF HAZARDOUS REACTIONS:** High temperatures will generate bismuth oxide fumes.

**CONDITIONS TO AVOID:** Avoid creating or accumulating fines or dusts. Avoid high temperatures.

**INCOMPATIBLE MATERIALS:** Strong acids, strong oxidizers, halogens and inter-halogen compounds.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Bismuth oxide fumes.

## SECTION 11: TOXICITY DATA

**Likely Routes of Exposure:** Inhalation, skin, eyes. Product as shipped does not present an inhalation hazard; however subsequent operations may create dusts or fumes which could be inhaled.

**Symptoms of Exposure:** May cause irritation.

**Acute and Chronic Effects:** Prolonged inhalation of bismuth dusts may cause mental changes, nervousness, blood changes, lymphocytosis and bone marrow depression. Ingestion of bismuth compounds may cause nausea, vomiting, diarrhea, and pigmentation of the skin and mucous membranes.

**Acute Toxicity:** No data

**Carcinogenicity:**

**NTP:** Not identified as carcinogenic

**IARC:** Not identified as carcinogenic

To the best of our knowledge the chemical, physical and toxicological characteristics of the substance are not fully known.

## SECTION 12: ECOLOGICAL DATA

**OVERVIEW:** No data available. Do not allow material to be released into the environment.

**MOBILITY:** N/A

**PERSISTANCE:** N/A

**BIOACCUMULATION:** N/A

**DEGRADABILITY:** N/A

**OTHER ADVERSE EFFECTS:** N/A

## SECTION 13: DISPOSAL INFORMATION

**DISPOSAL METHODS:** Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance

**WASTE DISPOSAL CODE(S):** Not determined

## SECTION 14: TRANSPORT INFORMATION

**GROUND– DOT PROPER SHIPPING NAME:**

**AIR– IATA PROPER SHIPPING NAME:**

Not regulated for ground transport by IATA

Not regulated for air transport by IATA.

## SECTION 15: REGULATORY INFORMATION

**TSCA STATUS:** All components in this product are on the TSCA Inventory.

CHEMICAL NAME:	CAS NUMBER	§ 313 NAME	§ 313 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Bismuth, Metal	7440-69-9	No	No	No	No	No

## SECTION 16: ADDITIONAL INFORMATION

**REVISED:** MAY 2015

The information contained in this document is based on the state of our knowledge at the time of publication and is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. Nathan Trotter and Company makes no representation, warranty, or guarantee of any kind with respect to the information contained in this document or any use of the product based on this information. Nathan Trotter and Company shall not be held liable for any damages resulting from handling or from contact with the above product. Users should satisfy themselves that they have all current data relevant to their particular use.

**ACGIH:** American Conference of Governmental Industrial Hygienists

**NTP:** National Toxicology Program

**CAS:** Chemical Abstract Service Number

**OSHA:** Occupational Safety and Health Administration

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

**PEL:** Permissible Exposure Limit

**DOT:** U.S. Department of Transportation

**PPM:** Parts per million

**RCRA:** Resource Conservation and Recovery Act

**IARC:** International Agency for Research on Cancer

**SARA:** Superfund Amendments and Reauthorization Act

**N/A:** Not Available

**TLV:** Threshold Limit Value

**IDLH:** Immediately dangerous to life and health

**TSCA:** Toxic Substances Control Act