



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

CHEMTEL 24 HR Emergency number: 1-800-255-3924

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

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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

IARC: International Agency for Research on Cancer

RCRA: Resource Conservation and Recovery Act

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