

Bismuth Powder



SAFETY DATA SHEET

1 PRODUCT AND SUPPLIER IDENTIFICATION

Product Name: Bismuth Powder

Formula: Bi

Supplier: ESPI Metals
1050 Benson Way
Ashland, OR 97520

Telephone: 800-638-2581

Fax: 541-488-8313

Email: sales@espimetals.com

Emergency: Infotrac 800-535-5053 (US) or 352-323-3500 (24 hour)

Recommended Uses: Scientific Research

2 HAZARDS IDENTIFICATION

GHS Classification (29 CFR 1910.1200): Not classified as hazardous

GHS Label Elements:

Signal Word: N/A

Hazard Statements: N/A

Precautionary Statements: N/A

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient: Bismuth

CAS#: 7440-69-9

%: 100

EC#: 231-177-4

4 FIRST AID MEASURES

General Measures: No special requirements.

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: Remove contaminated clothing, brush material off skin, wash affected area with soap and water. Seek medical attention if symptoms persist.

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

Most Important Symptoms/Effects, Acute and Delayed: May cause irritation. See section 11 for more information.

Indication of Immediate Medical Attention and Special Treatment: No other relevant information available.

5 FIREFIGHTING MEASURES

Extinguishing Media: Use Class D dry powder extinguishing agent.

Unsuitable Extinguishing Media: Do not use water, carbon dioxide or halogenated extinguishing agents.

Specific Hazards Arising from the Material: Fine dust is a weak to moderate fire hazard if allowed to accumulate and subjected to an ignition source. May release fumes of bismuth oxides under fire conditions.

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

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures: Wear appropriate respiratory and protective equipment specified in section 8. Isolate spill area and provide ventilation. Avoid breathing dust or fume. Avoid contact with skin and eyes. Eliminate all sources of ignition.

Methods and Materials for Containment and Cleaning Up: Avoid creating dust. Scoop or vacuum up spill using a vacuum with a HEPA filter. Place in properly labeled closed containers. Use only non-sparking tools and natural bristle brushes.

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

7 HANDLING AND STORAGE

Precautions for Safe Handling: Avoid creating dust. Avoid breathing dust or fumes. Provide adequate ventilation if dusts are created. 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: Store material tightly sealed in properly labeled containers. Store in a cool, dry area. Do not store together with oxidizers, acids or halogens. See section 10 for more information on incompatible materials.

8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits: Bismuth

OSHA/PEL: No exposure limit established

ACGIH/TLV: No exposure limit established

Engineering Controls: When working with finely divided powders, handle in a controlled, enclosed environment. Ensure adequate ventilation to maintain exposures below occupational limits. Whenever possible the use of local exhaust ventilation or other engineering controls is the preferred method of controlling exposure to airborne dust and fume to meet established occupational exposure limits. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

Respiratory Protection: If permissible levels are exceeded, use NIOSH approved dust respirator.

Eye Protection: Safety glasses

Skin Protection: Wear impermeable gloves, protective work clothing as necessary.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Form: Powder

Color: Gray

Odor: Odorless

Odor Threshold: Not determined

pH: N/A

Melting Point: 271.3 °C

Boiling Point: 1560±5 °C

Flash Point: N/A

Evaporation Rate: N/A

Flammability: N/A

Upper Flammable Limit: N/A

Lower Flammable Limit: N/A

Vapor Pressure: 1 mm Hg @ 1021 °C

Vapor Density: N/A

Relative Density (Specific Gravity): 9.80 g/cc

Solubility in H₂O: Insoluble

Partition Coefficient (n-octanol/water): Not determined

Autoignition Temperature: No data

Decomposition Temperature: No data

Viscosity: N/A

10 STABILITY AND REACTIVITY

Reactivity: No data

- Chemical Stability:** Stable under recommended storage conditions.
- Possibility of Hazardous Reactions:** Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source, is a possible dust explosion hazard.
- Conditions to Avoid:** Dusting conditions.
- Incompatible Materials:** Strong acids, strong oxidizers, halogens and interhalogen compounds.
- Hazardous Decomposition Products:** Bismuth oxide fumes.

11 TOXICOLOGICAL INFORMATION

- Likely Routes of Exposure:** Inhalation, skin and eyes.
- 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.

12 ECOLOGICAL INFORMATION

- Ecotoxicity:** No data
- Persistence and Degradability:** No data
- Bioaccumulative Potential:** No data
- Mobility in Soil:** No data
- Other Adverse Effects:** No further relevant information available.

13 DISPOSAL CONSIDERATIONS

- Waste Disposal Method:**
- Product:** Dispose of in accordance with Federal, State and Local regulations.
- Packaging:** Dispose of in accordance with Federal, State and Local regulations.

14 TRANSPORT INFORMATION

- Shipping Regulations:** Not regulated
- UN Number:** N/A
- UN Proper Shipping Name:** N/A
- Transport Hazard Class:** N/A
- Packing Group:** N/A

Marine Pollutant: No

15 REGULATORY INFORMATION

TSCA Listed: All components are listed.

Regulation (EC) No 1272/2008 (CLP): (-325 Mesh) N/A

Canada WHMIS Classification (CPR, SOR/88-66): (-325 Mesh) N/A

HMIS Ratings: Health: 1 **Flammability:** 1 **Physical:** 0

NFPA Ratings: Health: 1 **Flammability:** 1 **Instability:** 0

Chemical Safety Assessment: A chemical safety assessment has not been carried out.

16 OTHER INFORMATION

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. ESPI Metals 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. ESPI Metals 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.

Prepared by: ESPI Metals

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