

# Safety Data Sheet

**Bismuth**

**CAROLINA**<sup>®</sup>  
www.carolina.com

## Section 1 Product Description

**Product Name:** Bismuth  
**Recommended Use:** Science education applications  
**Synonyms:** N/A  
**Distributor:** Carolina Biological Supply Company  
2700 York Road, Burlington, NC 27215  
1-800-227-1150  
**Chemical Information:** 800-227-1150 (8am-5pm (ET) M-F)  
**Chemtrec:** 800-424-9300 (Transportation Spill Response 24 hours)

## Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

**DANGER**



Not a dangerous substance according to GHS classification criteria. No known OSHA hazards.

**GHS Classification:**

Acute Toxicity - Oral Category 1

<b>Acute Toxicity Dermal Contains</b>	100 % of the mixture consists of ingredient(s) of unknown toxicity
<b>Acute Toxicity Inhalation Gas Contains</b>	100 % of the mixture consists of ingredient(s) of unknown toxicity
<b>Acute Toxicity Inhalation Vapor Contains</b>	100 % of the mixture consists of ingredient(s) of unknown toxicity
<b>Acute Toxicity Inhalation Dust/Mist Contains</b>	100 % of the mixture consists of ingredient(s) of unknown toxicity

## Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Bismuth	7440-69-9	100

## Section 4 First Aid Measures

**Emergency and First Aid Procedures**

**Inhalation:** In case of accident by inhalation: remove casualty to fresh air and keep at rest.  
**Eyes:** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
**Skin Contact:** After contact with skin, wash immediately with plenty of water.  
**Ingestion:** IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

## Section 5 Firefighting Procedures

**Extinguishing Media:** Use media suitable to extinguish surrounding fire.  
**Fire Fighting Methods and Protection:** Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.  
**Fire and/or Explosion Hazards:** Fire or excessive heat may produce hazardous decomposition products.  
**Hazardous Combustion Products:** Bismuth Compounds

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## Section 6

## Spill or Leak Procedures

### Steps to Take in Case Material Is Released or Spilled:

No health effects expected from the clean-up of this material if contact can be avoided. Follow personal protective equipment recommendations found in Section 8 of this (M)SDS. Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

## Section 7

## Handling and Storage

**Handling:** Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid creating and inhaling dust. Do not ingest or take internally.  
**Storage:** Store locked up. Keep container tightly closed in a cool place.  
**Storage Code:** Green - general chemical storage

## Section 8

## Protection Information

Chemical Name	ACGIH		OSHA PEL	
	(TWA)	(STEL)	(TWA)	(STEL)
Bismuth	N/A	N/A	N/A	N/A

### Control Parameters

#### Engineering Measures:

No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

#### Personal Protective Equipment (PPE):

Lab coat, apron, eye wash, safety shower.

#### Respiratory Protection:

No respiratory protection required under normal conditions of use.

#### Eye Protection:

Wear chemical splash goggles when handling this product. Have an eye wash station available.

#### Skin Protection:

Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

#### Gloves:

No information available

## Section 9

## Physical Data

**Formula:** Bi  
**Molecular Weight:** 208.98  
**Appearance:** White to Gray Metallic Solid  
**Odor:** None  
**Odor Threshold:** No data available  
**pH:** No data available  
**Melting Point:** 271 C  
**Boiling Point:** 1564 C  
**Flash Point:** No data available  
**Flammable Limits in Air:** No data available

**Vapor Pressure:** 1 mmHg at 1021 °C  
**Evaporation Rate (BuAc=1):** No data available  
**Vapor Density (Air=1):** No data available  
**Specific Gravity:** 9.78  
**Solubility in Water:** Practically Insoluble  
**Log Pow (calculated):** No data available  
**Autoignition Temperature:** No data available  
**Decomposition Temperature:** No data available  
**Viscosity:** No data available  
**Percent Volatile by Volume:** No data available

## Section 10

## Reactivity Data

**Reactivity:** Not generally reactive under normal conditions.  
**Chemical Stability:** Stable under normal conditions.  
**Conditions to Avoid:** Exposure to air. Keep lid tightly closed when not in use.  
**Incompatible Materials:** Strong oxidizing agents, Strong acids, Aluminum alloys  
**Hazardous Decomposition Products:** Bismuth Compounds  
**Hazardous Polymerization:** Will not occur

## Section 11

## Toxicity Data

**Routes of Entry:** Inhalation and ingestion.  
**Symptoms (Acute):** Impaired Kidney Function, Liver disorders  
**Delayed Effects:** No data available

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**Acute Toxicity:**  
Chemical Name  
Bismuth

**CAS Number**  
7440-69-9

**Oral LD50**  
Oral LD50 Rat 5  
GM/KG  
Oral LD50 Mouse  
10 GM/KG

**Dermal LD50**  
Not determined

**Inhalation LC50**  
Not determined

**Carcinogenicity:**  
Chemical Name  
Bismuth

**CAS Number**  
7440-69-9

**IARC**  
Not listed

**NTP**  
Not listed

**OSHA**  
Not listed

**Chronic Effects:**

**Mutagenicity:** No evidence of a mutagenic effect.  
**Teratogenicity:** No evidence of a teratogenic effect (birth defect).  
**Sensitization:** No evidence of a sensitization effect.  
**Reproductive:** No evidence of negative reproductive effects.  
**Target Organ Effects:**

**Acute:** No information available  
**Chronic:** No information available

## Section 12

## Ecological Data

**Overview:** This material is not expected to be harmful to the ecology.  
**Mobility:** No data  
**Persistence:** No data  
**Bioaccumulation:** Bioconcentration is not expected to occur.  
**Degradability:** Naturally occurring element. Does not biodegrade.  
**Other Adverse Effects:** No data

Chemical Name	CAS Number	Eco Toxicity
Bismuth	7440-69-9	

## 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:**  
Not regulated for transport by US DOT.

**Air - IATA Proper Shipping Name:**  
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	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Bismuth	7440-69-9	No	No	No	No	No

## Section 16

## Additional Information

**Revised:** 09/09/2015

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The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

### Glossary

# Safety Data Sheet

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
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health