

MATERIAL SAFETY DATA SHEET  
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**BISMUTH**

### SECTION 1 - IDENTIFICATION

Furnished by: Grant Manufacturing & Alloying  
200-C Furnace Street  
P. O. Box 69  
Birdsboro, PA 19508

Effective Date: 1/1/2010  
Emergency Phone: 610-404-1380  
Person to Contact: Joe Guarini

### SECTION 2 - CONSTITUENTS

<i>Chemical</i>	<i>CAS</i>	<i>%WT</i>	<i>Carcinogen</i>	<i>TLV</i>
Bismuth	7440-69-9	98-100%	No	Oral rat LD50: 5g/kg

### SECTION 3 - PHYSICAL DATA

Melting Point 520 degrees F  
Boiling Point N/A  
Vapor Pressure 1 @ 1021C (1870F)  
Vapor Density Not volatile  
Solubility in Water Nil  
Appearance / Color Grayish-white or silver metallic granules.  
Density (g/cm<sup>3</sup>) 7.88  
Odor None  
% Volatile Nil  
pH N/A  
Evaporation Rate (nBuAc=1) N/A

#### **SECTION 4 - FIRE AND EXPLOSION HAZARD DATA**

Flash Point	Not flammable
Flammable Limits	N/A
Extinguishing Methods	Use any means suitable for extinguishing surrounding fire. Do not use water on fire where molten metal is present.
Fire Fighting Equipment	In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Toxic bismuth fumes may be released during a fire.

#### **SECTION 5 - REACTIVITY DATA**

Stability	Stable under ordinary conditions of use and storage.
Conditions to Avoid	Heat, flame, ignition sources, dusting, air, light and incompatibles.
Hazardous Polymerization	Will not occur
Incompatibility	Strong acids, reducing agents, halogens and oxidizers
Hazardous Decomposition	No hazardous decomposition products.

#### **SECTION 6 - SPILL, LEAK AND DISPOSAL PROCEDURES**

Action to Take for Spills	Allow to solidify, collect and place in sealed drums
Disposal Method	Return to supplier

#### **SECTION 7 - HEALTH HAZARD INFORMATION**

Eye	Dust or fumes will be an irritant
Skin Contact	Not a route of entry to the body
Skin Absorption	Not a route of entry to the body
Ingestion	Bismuth salt is poorly absorbed. Should absorption occur, symptoms may include loss of appetite, headache, skin rashes, kidney damage, and rarely mild jaundice.
Inhalation	May cause irritation to the respiratory tract. Symptoms may include coughing and shortness of breath.
Chronic Exposure	Repeated or prolonged ingestion may cause a "bismuth line", black spots on the gums, foul breath, and salivation. Chronic exposure may affect kidneys and liver.

**SECTION 8 - FIRST AID PROCEDURES**

Eyes	Flush eyes with water for 15 minutes
Skin	Wash thoroughly with soap and water and remove contaminated clothes
Ingestion	Induce vomiting if person is still conscious, seek medical attention
Inhalation	Remove person to fresh air, seek proper medical assistance

**SECTION 9 - SPECIAL HANDLING PROCEDURES**

Ventilation	If fumes or dust is being generated, a mechanical device must be used to maintain exposure levels below TLVs
Respiratory Protection	Only required if TLVs are exceeded, use proper dust & fume mask.
Skin Protection	Not normally required

**SECTION 10 - SPECIAL PRECAUTIONS & ADDITIONAL INFORMATION**

Storage & Handling	Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, ignition sources, moisture and incompatibilities. Avoid dust dispersal. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.
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**SECTION 11 - TRANSPORTATION**

Proper Shipping	Not required
UN Number	N/A
NA Number	N/A
DOT Exemption Number	N/A
Hazardous Classes	N/A

NOTE: The information given is in good faith, but no warranty, expressed or implied, is made.