



Consolidated Alloys

A Division of C.A. Group Australasia Pty. Ltd.
ABN 83 005 084 097 ACN 005 084 097

Head Office : 32 Industrial Avenue Thomastown, Victoria 3074
AUSTRALIA
Mail : PO Box 199, Reservoir, Victoria 3073
AUSTRALIA
Telephone : (03) 9359 5811
Facsimile : (03) 9359 4076
E-mail : info@cagroup.com.au

Reference No. : M119
Product Name : Bismuth

MATERIAL SAFETY DATA SHEET

Section 1 : IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **BISMUTH**
Other Names:
Recommended Use: For alloying.

Supplier's / Manufacturer's

Name: Consolidated Alloys
Address: 32 Industrial Avenue, Thomastown, Victoria 3074, AUSTRALIA
Telephone No.: (03) 9359 5811
Emergency No.: (03) 9359 5811 – Business Hours
0439 062 480 – After Hours (24Hrs)

Poisons Information Centre
Victoria
Telephone No.: 131126

Section 2 : HAZARD IDENTIFICATION

Hazard Classification according to criteria of Worksafe Australia.

Risk Phrase(s) R20/21 Harmful by inhalation and contact with skin.
R36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrase(s) S7/8 Keep container tightly closed and dry.
S36/37 Wear suitable protective clothing and gloves.



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Section 3 : COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Entity	Proportion	CAS Number
Bismuth	100%	7440-69-9

Section 4 : FIRST AID MEASURES

Description of necessary measures according to route of exposure.

Ingestion: DO NOT induce vomiting. Give several glasses of water to drink to dilute. If large amounts were swallowed, seek immediate medical advice.

Eye: Check for and remove any contact lenses. In case of contact, immediately flush eye(s) with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin: Wash exposed area with soap and water. Remove contaminated clothing and shoes. Get medical advice if irritation develops.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention for any breathing difficulties.

Medical Attention and Special Treatment: Treat symptomatically.

Additional information

Aggravated Medical Conditions Caused by Exposure: Repeated or prolonged ingestion may cause a 'bismuth line', black spots on the gums, foul breath and salivation. Chronic exposure may affect kidneys, lungs, mucous membranes and liver.



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Section 5 : FIRE FIGHTING MEASURES

- Extinguishing Media: Use water spray, fog, foam, Dry Chemical Powder or Carbon Dioxide. Do not use water on fire where molten metal is present.
- Hazards from Combustion Products: Moderate fire hazard when exposed to heat or flame. Readily flammable in powder form. Material in powder form, capable of creating a dust explosion.
- Special Protective Equipment: In the event of a fire, fire fighters should wear protective clothing and self contained breathing apparatus in the risk of exposure to products of decomposition.

Additional information

HAZCHEM CODE: None Allocated

Section 6 : ACCIDENTAL RELEASE MEASURES

Emergency Procedures: Refer to protection measures listed in 7/8.

Methods and Materials for Containment and Clean Up Procedures

- Small Spills / Leaks: Sweep or vacuum to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to authority requirements.
- Large Spills / Leaks: Remove all sources of ignition. Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface. Dispose by returning to the supplier or in accordance with local, state and federal regulatory procedures.

For Personal Protective Equipment (PPE) - refer to Section 8 of this MSDS (if required)



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Section 7 : HANDLING AND STORAGE

Precautions for Safe Handling: Keep away from heat. Keep away from sources of ignition. Avoid dust dispersal. Do not breathe dust.

Conditions for Safe Storage: Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, well-ventilated area away from sources of heat, ignition sources, moisture and incompatibilities.

Section 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

National Exposure Standards – as regulated by: Worksafe Australia

Chemical Name	ES – TWA	ES - STEL	ES – Peak
Bismuth	Not Listed		

Biological Limit Values: No data available.

Engineering Controls: General ventilation/local exhaust is recommended in areas where dust and fumes are produced to keep exposure levels as low as possible.

Personal Protective Equipment (PPE)

Eye / Face Protection: Safety Glasses/goggles. Have an eyewash station in the work area.

Skin Protection: Gloves, protective clothing and safety boots should be worn when handling.

Respiratory Protection: An approved dust/fume respirator should be worn when ventilation is not sufficient.



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Section 9 : PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Solid, lustrous metal
Colour:	Silver metallic granules
Odour:	Nil
Vapour Pressure:	N/A
Vapour Density:	N/A
Boiling Point:	1560oC
Melting Point:	271oC
Solubility in Water:	Insoluble in cold water.
Specific Gravity:	9.8
Flash Point:	N/A
pH:	N/A

For Flammable Limits (as a percentage volume in air)

Lower Explosion Limit :	N/A
Upper Explosion Limit :	N/A
Ignition Temperature:	N/A
Specific Heat Value :	N/A
Particle Size:	N/A
Volatile Organic Compounds (VOC) Content	N/A
Evaporation Rate :	N/A
Viscosity :	N/A
Percent Volatile :	N/A
Octanol/Water partition coefficient :	N/A
Saturated Vapour Concentration :	N/A
Additional Characteristics	N/A
Flame Propagation/Burning Rate of Solid Materials :	N/A
Properties of material that may initiate or contribute to fire intensity :	N/A
Potential for Dust Explosion :	Nil
Reactions that Release Flammable Gasses :	Nil
Fast or Intensely Burning Characteristics :	N/A
Non-Flammables that could contribute unusual hazards to a fire :	None
Release of invisible flammable vapour and gasses :	Nil
Decomposition Temperature :	N/A

Additional Information

Molecular Weight :	208.98 g/mole
Solubility :	Insoluble in water.



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Section 10 : STABILITY AND REACTIVITY

Chemical Stability:	Stable under the handling and storage conditions listed in section 7.
Conditions to Avoid:	Heat, flame, ignition sources, sunlight and incompatibles.
Incompatible Materials:	Aluminium, bromine trifluoride, strong oxidisers, strong acids, ammonium nitrate, chlorine, nitric acid, bismuth hydroxide plus aluminium hydroxide.
Hazardous Decomposition Products:	None
Hazardous Reactions:	None

Section 11 : TOXICOLOGICAL INFORMATION

Toxicity Data:	No Data Available.
Ingestion:	Bismuth salt is poorly absorbed. Should absorption occur, symptoms may include loss of appetite, headache, skin rashes and kidney damage.
Eye:	May cause mild irritation.
Skin:	May cause mild irritation. Absorption may occur only through broken skin.
Inhaled:	May cause irritation to the respiratory tract. Symptoms may include coughing and shortness of breath.

Section 12 : ECOLOGICAL INFORMATION

Ecotoxicity:	Not Available
Persistence / Degradability:	Possibly hazardous short term degradation products are not likely.
Mobility:	No Data Available
Environmental Fate:	No Data Available
Bioaccumulative Potential :	No Data Available



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Section 13 : DISPOSAL CONSIDERATIONS

Disposal Methods: What can't be saved for recovery or recycling should be managed in an appropriate waste disposal facility. Dispose of container and unused contents in accordance with federal, state and local authorities.

Special Precautions for Landfill or Incineration: No information found.

The Disposal Considerations mentioned above applies to the material / product described in this MSDS as manufactured. Further processing, use, or contamination of the product may make the information inappropriate, inaccurate or incomplete.

Section 14 : TRANSPORT INFORMATION

UN Number: None Allocated
UN Shipping Name: N/A
Dangerous Goods Class: None Allocated
Packing Group: None Allocated
Special Precautions / Requirement: N/A
HAZCHEM Code: None Allocated

Additional Information –
Material for Export: N/A

Section 15 : REGULATORY INFORMATION

Poison Schedule Number: None Allocated
EPG: None Allocated
AICS Name: N/A
NZ Toxic Substance: N/A



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Section 16 : OTHER INFORMATION

Last Revision: 14/04/2008

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----- End of MSDS -----