



ALCHEMY CASTINGS INC.

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Material Safety Data Sheet

WHMIS (Pictogram)	WHMIS (Classification)	Protective Equipment
	D-1B: Material causing Immediate and serious toxic effects.	

SECTION I: Product and Company Identification	
Common Name: LOW 197	In Case Of Emergency Canutec (CAN): (613) 996-6666
Trade Name: LOW 197, AIM 92	
Chemical Family: Bismuth Based Alloy	
Material Use: Soldering, Pouring	
Supplier Name: Alchemy Castings 563 Kenilworth Ave. N. Hamilton, Ontario Canada L8H 4T8	Date Prepared: February 2010

SECTION II: Composition and Information on Ingredients				
Name	CAS #	% by Weight	Exposure Limit	LD50 oral, rat
Bismuth (Bi)	7440-69-9	51.6	No data	500 mg/kg
Lead (Pb)	7439-92-1	40.2	0.05 mg/m ³	790 mg/kg
Cadmium (Cd)	7440-43-9	8.2	0.01 mg/m ³	225 mg/kg

SECTION III: Physical Information			
Boiling Point (°C)	Unknown	Specific Gravity	10.25
Vapour Pressure (mm Hg)	Unknown	% Volatile (By Volume)	Not Pertinent
Vapour Density (Air=1)	Unknown	Evaporation Rate (Ether=1)	Not Pertinent
Solubility In Water	Nil	pH	Not Pertinent
Appearance	Metallic Silver	Melting Point (°C)	92
Odour	None	Form	Bar, Ingot

SECTION IV: Transport Information			
Shipping Name	Not Regulated	Class/Division	Not Pertinent
UN Number	Not Pertinent	Packing Group	Not Pertinent

SECTION V: Fire and Explosion Hazards	
Flash Point (°C) and Method	Dust may generate a fire
Flammable Limits in Air (Vol %)	Upper: Not Pertinent Lower: Not Pertinent
Means of Extinction	Class D – Dry Chemical or Sand

SECTION VI: Health Hazard and First Aid Data

Ingestion	Effects:	Diarrhea, nausea, vomiting, abdominal pain, headaches, muscle soreness, loss of appetite.			
	First Aid:	Seek medical aid.			
Eye Contact	Effects:	Molten metal could splash into eye.			
	First Aid:	Flush with cool water for 15 minutes and seek immediate medical aid.			
Skin Contact	Effects:	Not a recognized hazard.			
	First Aid:	If dust or mist gets on skin, wash skin with soap and water. Remove clothing and launder.			
Skin Absorption	Not Pertinent				
Inhalation	Dryness of throat, cough, pain in chest, fume fever, nausea, headaches, metallic taste, loss of appetite.				
Effects of Acute Exposure	Diarrhea, nausea, salivation, abdominal pain, headaches, vomiting, lead encephalopathy.				
Effects of Chronic Exposure	Muscle soreness, loss of appetite, metallic taste, abdominal cramps, high blood lead.				
Carcinogenicity	IARC (Yes)				
Mutagenicity	Yes	Teratogenicity	Yes	Reproductive Effects	Yes

SECTION VII: Reactivity Data

Stability	Stable - Yes	Conditions to Avoid	Not Pertinent			
Incompatible Materials	Water	No	Acid	No	Oxidizers	Yes
	Corrosive	No	Alkali	No	Reducers	No
	Other	No				
Hazardous Decomposition Products	Not Pertinent					
Hazardous Polymerization	May Occur	No	Will Not Occur	X		
	Conditions to Avoid	Not Pertinent				

SECTION VIII: Preventative Measures	
Steps to be taken in case Material is Released or Spilled: If spill of dust, use cleanup methods which avoid dust generation. Use water and wet sweep or vacuum.	
Waste Disposal Method: Dispose of in accordance with appropriate federal and local regulations.	
Respiratory Protection: When engineering controls are not feasible to control overexposure, use appropriate NIOSH approved respirators.	
Engineering Controls	Local Exhaust Essential to keep worker exposure within allowable limits during welding or grinding.
	Mechanical (General) Not Applicable
	Special Not Applicable Other Not Applicable
	Not Applicable
Protective Gloves: As needed to protect against physical hazards.	Eye Protection: Safety glasses, goggles or face shield if molten.
Other Protective Equipment: Heat resistant leggings and gloves if pouring molten metal.	

SECTION IX: Special Precautions	
Precautions to be taken in Handling and Storing: The scrap metal itself presents no health hazard unless it is welded, burned, ground or cut. Possible fumes may be generated. Should have complete evaluation done. Wash hands and arms after handling.	
Special Precautions and Waste Disposal Methods: Return to manufacturer, scrap dealer, or dispose of in accordance to local & federal regulations.	

SECTION X: Notice to Reader	
The information contained in this MSDS was obtained from sources which are believed to be reliable. It is the user's responsibility to determine the suitability of this information for adoption of necessary safety precautions. The manufacturer does not assume responsibility and expressly disclaims liability for any loss, damage, or expense arising out of or in any way connected with, the handling, storage, use or disposal of the product identified in this MSDS.	

Prepared by: Health, Safety and Environment Department of Alchemy Castings