

**CHIP QUIK, INC.**  
**The SMD Removal Solution**  
**195 Falmouth Road Unit 1C**  
**Mashpee, MA 02649**

31930001 (ms) Thru 319502000  
 SMD 16

*Alloy*

SMD 1 SMD 4.5

SMD 32

# Material Safety Data Sheet

Section 1: Chemical Product and Company Identification	
Common Name	AIM 58
Supplier	AIM
Synonym	Bi./In./Pb./Sn.
Trade name	AIM 58
Material Uses	Metal industry: Metallurgy. Low melting alloy
Manufacturer	AIM 9100 Henri-Bourassa east, Montreal, Quebec, H1E 2S4
Code	Not available.
MSDS#	Not available.
Validation Date	5/20/98
Print Date	8/20/99
In case of Emergency	USA: Infotrac (800)535-5053 INTERNATIONAL: Infotrac (708)918-1900 CANADA: not available

Section 2: Composition and Information on Ingredients				
Name	CAS #	% by Weight	TLV/PEL	LC <sub>50</sub> /LD <sub>50</sub>
Iridium	7440-74-6	10-30	TWA: 0.1 (mg/m <sup>3</sup> ) from ACGIH (TLV) [1986] Total. TWA: 0.1 (mg/m <sup>3</sup> ) from ACGIH TWA: 0.1 (mg/m <sup>3</sup> ) from NIOSH	Not available.
Lead	7439-92-1	10-30	TWA: 0.05 (mg/m <sup>3</sup> ) from ACGIH (TLV) TWA: 0.05 (mg/m <sup>3</sup> ) from ACGIH TWA: 0.1 (mg/m <sup>3</sup> ) from NIOSH	Not available.
Tin	7440-31-5	7-13	TWA: 2 STEL: 0.2 (mg/m <sup>3</sup> ) from OSHA (PEL) [1997] Respirable. TWA: 2 (mg/m <sup>3</sup> ) from OSHA (PEL) [1993] Respirable. TWA: 2 STEL: 0.2 (mg/m <sup>3</sup> ) from ACGIH [1994] Respirable. TWA: 2 (mg/m <sup>3</sup> ) from NIOSH	Not available.

Section 3: Hazards Identification	
Routes of Entry	Eye contact. Ingestion. Inhalation. Skin contact.
Potential Acute Health Effects	Fumes and/or dusts produced by this product may be hazardous in case of eye contact (irritant), of ingestion, of inhalation. Inflammation of the eye is characterized by redness, watering, and itching. This product may be hazardous in case of skin contact (irritant, sensitizer).
Potential Chronic Health Effects	Fumes and/or dusts produced by this product may be hazardous in case of eye contact (irritant), of ingestion, of inhalation. This product may be hazardous in case of skin contact (irritant, sensitizer). <b>CARCINOGENIC EFFECTS:</b> [LEAD]: Classified + (Proven) by OSHA, A3 (Proven for animal) by ACGIH, 2B (Possible for human) by IARC. <b>MUTAGENIC EFFECTS:</b> Not available. <b>TERATOGENIC EFFECTS:</b> Not available. <b>DEVELOPMENTAL TOXICITY:</b> PROVEN [Lead] The product may be toxic to blood, kidneys, liver, heart, upper respiratory tract, skin, eyes, the nervous system, the reproductive system, spleen, brain, digestive system, gastro-intestinal tract, lungs. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Continued on Next Page

**Section 4. First Aid Measures**

<b>Eye Contact</b>	Check for and remove any contact lenses. DO NOT use an eye ointment. Seek medical attention.
<b>Skin Contact</b>	Prolonged and repeated contact with bare skin may cause irritation. Wash gently and thoroughly the contaminated skin with running water and non-abrasive soap.
<b>Hazardous Skin Contact</b>	MOLTEN METAL causes SEVERE BURNS! In case of BURNS: DO NOT USE WATER. Cover with antiseptic ointment and steril gauze. Seek IMMEDIATE medical attention.
<b>Inhalation</b>	Allow the victim to rest in a well ventilated area. Seek immediate medical attention.
<b>Hazardous Inhalation</b>	No additional information.
<b>Ingestion</b>	DO NOT induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.
<b>Hazardous Ingestion</b>	No additional information.

**Section 5. Fire and Explosion Data**

<b>Flammability of the Product</b>	Non-flammable.
<b>Auto-Ignition Temperature</b>	Not applicable.
<b>Flash Points</b>	Not applicable.
<b>Flammable Limits</b>	Not applicable.
<b>Products of Combustion</b>	Not applicable.
<b>Fire Hazards in Presence of Various Substances</b>	Not applicable.
<b>Explosion Hazards in Presence of Various Substances</b>	Non-explosive in presence of open flames and sparks, of shocks, of heat.
<b>Fire Fighting Media and Instructions</b>	Not applicable.
<b>Special Remarks on Fire Hazards</b>	Massive metal is nonflammable.
<b>Special Remarks on Explosion Hazards</b>	No additional remark.

**Section 6. Accidental Release Measures**

<b>Small Spill</b>	MOLTEN METAL: Let cool before picking up and returning to process or recycling. OTHER: Use appropriate tools to put the spilled solid in a container reserved to that effect.
<b>Large Spill</b>	MOLTEN METAL: Let cool before picking up and returning to process or recycling. OTHER: Use appropriate instruments to put the spilled material in a container reserved to that effect.

**Section 7. Handling and Storage**

<b>Handling</b>	Wear suitable protective clothing. Use in a well ventilated area. When using do not eat, drink or smoke. Avoid contact with skin and eyes. After handling, always wash hands thoroughly with soap and water.
<b>Storage</b>	Keep container tightly closed. Keep in a cool and well-ventilated area. Highly toxic or infectious materials should be stored in a separate locked safety storage cabinet or room.

Continued on Next Page

**Section 8. Exposure Controls/Personal Protection**

<b>Engineering Controls</b>	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.	
<b>Personal Protection</b>	HANDLING: gloves, safety glasses, dust respirator REMELTING: heat resistant gloves, splash goggles or face-shield, coveralls, dust and fume respirator. Wear suitable respirator if ventilation is inadequate. Be sure to use a MSHA/NIOSH approved respirator or equivalent.	
<b>Personal Protection in Case of a Large Spill</b>	Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.	
<b>Chemical Name or Product Name</b>	<b>CAS #</b>	<b>Exposure Limits</b>
Iron	7440-74-6	TWA:0.1 (mg/m <sup>3</sup> ) from ACGH (TLV) [1986] Total TWA:0.1 (mg/m <sup>3</sup> ) from ACGH TWA:0.1 (mg/m <sup>3</sup> ) from NIOSH
Lead	7439-92-1	TWA:0.05 (mg/m <sup>3</sup> ) from ACGH (TLV) TWA:0.05 (mg/m <sup>3</sup> ) from ACGH TWA:0.1 (mg/m <sup>3</sup> ) from NIOSH
Tin	7440-31-5	TWA:2 STEL: 0.2 (mg/m <sup>3</sup> ) from OSHA (PEL) [1997] Respirable. TWA:2 (mg/m <sup>3</sup> ) from OSHA (PEL) [1993] Respirable. TWA:2 STEL: 0.2 (mg/m <sup>3</sup> ) from ACGH [1994] Respirable. TWA:2 (mg/m <sup>3</sup> ) from NIOSH

**Section 9. Physical and Chemical Properties**

<b>Physical state and appearance</b>	Solid.	<b>Odor</b>	Odorless.
<b>Molecular Weight</b>	Not applicable.	<b>Taste</b>	Not applicable.
<b>pH (1% soln/water)</b>	Not applicable.	<b>Color</b>	Silver-grey.
<b>Boiling Point</b>	Not available.		
<b>Melting Point</b>	58°C (136.4°F)		
<b>Critical Temperature</b>	Not available.		
<b>Specific Gravity</b>	9.24 (Water = 1)		
<b>Vapor Pressure</b>	Not available		
<b>Vapor Density</b>	Not available.		
<b>Volatility</b>	Not available.		
<b>Odor Threshold</b>	Not available.		
<b>Evaporation rate</b>	Not available.		
<b>Viscosity</b>	Not available.		
<b>Water/Oil Dist. Coeff.</b>	The product is insoluble in water and oil.		
<b>Ionicity (in Water)</b>	Non-ionic.		
<b>Dispersion Properties</b>	Is not dispersed in cold water, hot water, methanol, diethyl ether, n-octanol, acetone.		
<b>Solubility</b>	Insoluble in cold water, hot water, methanol, diethyl ether, n-octanol, acetone.		
<b>Physical Chemical Comments</b>	Not available.		

**Section 10. Stability and Reactivity Data**

<b>Chemical Stability</b>	The product is stable.
<b>Conditions of Instability</b>	Over melting point, toxic metallic oxides may be evolved.
<b>Incompatibility with various substances</b>	Molten metal reacts violently with water.
<b>Hazardous Decomposition Products</b>	Not available.
<b>Hazardous Polymerization</b>	No.

Continued on Next Page

**Section 11. Toxicological Information**

<b>Toxicity to Animals</b>	LD50: Not available. LC50: Not available.
<b>Chronic Effects on Humans</b>	<b>CARCINOGENIC EFFECTS:</b> [LEAD]: Classified + (Proven) by OSHA, A3 (Proven for animal) by ACGIH, 2B (Possible for human) by IARC. <b>DEVELOPMENTAL TOXICITY:</b> PROVEN [Lead] The product may be toxic to blood, kidneys, liver, heart, upper respiratory tract, skin, eyes, the nervous system, the reproductive system, spleen, brain, digestive system, gastro-intestinal tract, lungs.
<b>Other Toxic Effects on Humans</b>	Fumes and/or dusts produced by this product may be hazardous in case of eye contact (irritant), of ingestion, of inhalation. This product may be hazardous in case of skin contact (irritant, sensitizer).
<b>Special Remarks on Toxicity to Animals</b>	No additional remark.
<b>Special Remarks on Chronic Effects on Humans</b>	Human: LEAD crosses the placental barrier. <b>CHRONIC OVEREXPOSURE EFFECTS;</b> Increase of LEAD LEVEL in blood, muscle soreness, metallic taste, abdominal cramps, headaches. Overexposure to tin oxide fumes may result in benign pneumoconiosis (stannosis). Overexposure to fumes may cause irritation to the respiratory tract, digestive system and to the eyes. Repeated and prolonged contact with bare skin may cause irritation, dermatitis and/or an allergic reaction (sensitization) in susceptible individuals.
<b>Special Remarks on other Toxic Effects on Humans</b>	MOLTEN METAL can cause severe BURNS!

**Section 12. Ecological Information**

<b>Ecotoxicity</b>	Not available.
<b>BOD5 and COD</b>	Not available.
<b>Products of Biodegradation</b>	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
<b>Toxicity of the Products of Biodegradation</b>	The products of degradation are more toxic.
<b>Special Remarks on the Products of Biodegradation</b>	No additional remark.

**Section 13. Disposal Considerations**

<b>Waste Disposal</b>	Recycle, if possible. Consult your local or regional authorities.
-----------------------	---

**Section 14. Transport Information**

<b>DOT Classification</b>	Not a DOT controlled material (United States).
<b>Propper Shipping Name</b>	Not applicable.
<b>DOT Identification Number</b>	Not applicable.
<b>Packing Group</b>	Not applicable.
<b>Hazardous Substances Reportable Quantity</b>	Not available.
<b>Special Provisions for Transport</b>	Not applicable.
<b>TDG Classification</b>	Not controlled under TDG (Canada).
<b>IMDG Classification</b>	Not controlled under IMDG.
<b>IATA Classification</b>	Not controlled under IATA.

Continued on Next Page

**Section 15. Regulatory Information**

**Federal and State Regulations**

California prop. 65: This product contains [LEAD] for which the State of California has found to cause cancer, birth defects or other reproductive harm (female, male), which would require a warning under the statute.  
California prop. 65 (no significant risk level): Lead: 0.0065 mg/day (inhalation)

Rhode Island RTK hazardous substances: Lead, Tin;  
Pennsylvania RTK: Indium, Lead, Tin;  
Florida: Indium, Lead, Tin;  
Minnesota: Indium, Lead, Tin;  
Michigan critical material: Lead;  
Massachusetts RTK: Indium, Lead, Tin;  
New Jersey: Lead, Tin

TSCA inventory: Bismuth, Indium, Lead, Tin;  
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Lead: delayed health hazard;  
SARA 313 toxic chemical notification and release reporting: Lead 0.1%;  
CERCLA hazardous substances: Lead 10 lbs. (4.536 kg);

NOTE:  
BE AWARE THAT THESE REGULATIONS MAY NOT APPLY TO THE PARTICULAR FORM IN WHICH THIS PRODUCT IS SOLD.  
PLEASE CHECK WITH YOUR LOCAL AUTHORITIES.

**Other Classifications**

WHMIS (Canada) WHMIS CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

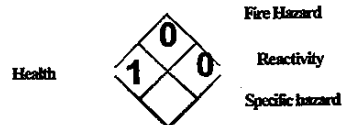
DSCL (EEC) R33- Danger of cumulative effects.  
R61- May cause harm to the unborn child.  
R62- Possible risk of impaired fertility.  
R20/22- Harmful by inhalation and if swallowed.

**Section 16. Other Information**

**HMIS (U.S.A.)**

	*	1
		0
Reactivity		0
Personal Protection		1

National Fire Protection Association (U.S.A.)



**References**

-ACGIH, Threshold Limit Values, 1994-1995. -Canada Gazette Part II, Vol. 122, No. 2 Registration SOR/88-64 31 December, 1987 Hazardous Products Act "Ingredient Disclosure List". -CFR29, OSHA's Permissible Exposure Limits, revision July, 1993. -CFR29, part 1910.1200, Hazard Communication. -Components' manufacturer's Material Safety Data Sheet. -CRC Handbook of chemistry and physics, 67 th edition, CRC Press inc., Boca Rota, Florida. -CSST (Comission de Santé et Sécurité au Travail), document #RT-12: Classification of Certain Chemical Substances. -NFPA, Fire Protection Guide to Chemical Hazards, 11th edition. -NIOSH, Pocket Guide to Chemical Hazards, revision June 1994. -TSCA (Toxic Substance Control Act), Chemical Substance Inventory List, 1985. -TATA, Dangerous Goods Regulations, 37th edition (January 1, 1996) -LOLIPRO vol. 13, Environmental Health & Safety Series II, Micromedex Inc.

**Other Special Considerations**

-ALL INGREDIENTS WITH SUSCEPTIBLE HAZARDS THAT ARE PRESENT IN A CONCENTRATION GREATER THAN 1 % ( GREATER THAN 0.1 % FOR CARCINOGENS ) HAVE BEEN DISCLOSED IN THIS SAFETY DOCUMENT.

Validated by C. Gosselin on 5/20/98.

Verified by C. Gosselin.

Printed 8/20/99.

USA: Infotrac (800)535-5053  
INTERNATIONAL: Infotrac (708)918-1900  
CANADA: not available

**Notice to Reader**

*To the best of my knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.*