Section 1. Chemical Product and Company Identification

Common Name
AIM 58

Supplier
AIM

Synonyms
Bi-In, Pb/Sn.

Trade name
AIM 58

Material Uses
Metal industry: Metallurgy; Low melting alloy

Manufacturer
AIM
9100 Henri-Bourassa est.
Montreal, Quebec, H1E 2S4

Section 2. Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS #</th>
<th>% by Weight</th>
<th>TLV/PEL</th>
<th>LC50/EC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indium</td>
<td>7440-74-6</td>
<td>10-30</td>
<td>TWA: 0.1 (mg/m³) from ACGIH (TLV) (1995) Total.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Lead</td>
<td>7439-92-1</td>
<td>10-30</td>
<td>TWA: 0.1 (mg/m³) from ACGIH (TLV). TWA: 0.05 (mg/m³) from NIOSH.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Tin</td>
<td>7440-31-5</td>
<td>7-13</td>
<td>TWA: 0.05 (mg/m³) from ACGIH (TLV). TWA: 0.1 (mg/m³) from NIOSH. TWA: 2.0 (mg/l) from IRSSA (PEL) (1997).</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

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. - Irritation of the eye is characterized by redness, watering, and itching. This product may be hazardous in case of skin contact (irritant, sensitiser).

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, sensitiser).

CANCER-CAUSING EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: PROVEN [Lead]
The product may be toxic to blood, kidneys, liver, heart, upper respiratory tract, skin, eyes, the nervous system, the reproductive system, liver, upper digestive system, heart, lung.
Repeated or prolonged exposure to the substance can produce target organ damage. Repeated exposure to toxic material may produce general deterioration of health by an accumulation in one or more human organs.

Continued on Next Page
Section 4. First Aid Measures

Eye Contact
Check for and remove any contact lenses. DO NOT use an eye ointment. Seek medical attention.

Skin Contact
Prolonged and repeated contact with bare skin may cause irritation. Wash gently and thoroughly the contaminated skin with running water and non-abrasive soap.

Hazardous Skin Contact
MOLLEN METAL causes SEVERE BURNS. In case of BURNS, DO NOT USE WATER. Cover with antiseptic ointment and sterile gauze. Seek IMMEDIATE medical attention.

Inhalation
Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Hazardous Inhalation
No additional information.

Ingestion
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; use 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.

Hazardous Ingestion
No additional information.

Section 5. Fire and Explosion Data

Flammability of the Product
Non-flammable.

Auto-Ignition Temperature
Not applicable.

Flash Point
Not applicable.

Flammable Limits
Not applicable.

Products of Combustion
Not applicable.

Fire Hazards in Presence of Various Substances
Not applicable.

Explosion Hazards in Presence of Various Substances
Non-explosive in presence of open flames and sparks, of smoke, of heat.

Fire Fighting Media and Instructions
Not applicable.

Special Remarks on Fire Hazards
Massive metal is nonflammable.

Section 6. Accidental Release Measures

Spill
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 for that effect.

Large Spill
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 for that effect.

Section 7. Handling and Storage

Handling
Wear suitable protective clothing. Use in a well ventilated area. When using do not eat, drink or smoke. Avoid contact with skin anywhere. After handling, always wash hands thoroughly with soap and water.

Storage
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

Engineer Flag Controls
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operation generates dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection
HANDLING: gloves, safety glasses, face washable. RESPIRATORY: head resistant gloves, safety glasses, face shield, covered, dust and fume respirator. Wear suitable respirator if ventilation is inadequate. Be sure to use a NIOSH-approved respirator or equivalent.

Personal Protection in Case of a Large Spill
Sparen glasses. 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.

Chemical Name or Product Name

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Exposure Limits</th>
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</table>

Section 9. Physical and Chemical Properties

Physical state and appearance
Solid.

Molecular Weight
Not applicable.

Melting Point
Not available.

Critical Temperature
Not available.

Specific Gravity
9.24 (Water = 1)

Vapor Pressure
Not available.

Vapor Density
Not available.

Solubility
Not available.

Evaporation Rate
Not available.

Viscosity
Not available.

Water/Oil Ratio
The product is insoluble in water and oil.

pH
Non-ionic.

Dispersion Properties
Is not dispersed in cold water, hot water, methanol, diethyl ether, n-octanol, acetone.

Solubility
Insoluble in cold water, hot water, methanol, diethyl ether, n-octanol, acetone.

Physical Chemical Constants
Not available.

Section 10. Stability and Reactivity Data

Chemical Stability
The product is stable.

Conditions of Instability
Over melting point, toxic metallic oxides may be evolved.

Incompatibility with Various Substances
Acid base react violently with water.

Hazardous Decomposition Products
Not available.

Hazardous Polymerization
No.

Continued on Next Page
Section 11. Toxicological Information

Toxicity to Animals
LD50: Not available.
LD5: Not available.

Chronic Effects on Humans
CANCEROGENIC EFFECTS: [LEAD] Classified = (Proven) by OSHA. AC (Proven for animals) by AGAMI. 28 (Possible for humans) by IARC.
DEVELOPMENTAL TOXICITY: PROVEN Lead.
The product may be toxic to blood, kidneys, liver, heart, upper respiratory tract, skin, eyes, nervous system, and reproductive system.

Other Toxic Effects on Humans
Fumes 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, sensitization).

Section 12. Ecological Information

Biodegradability
Not available.

Products of Biodegradation
Possibly hazardous short-term degradation products are not likely. However, long-term degradation products may occur.

Toxicity of the Products of Biodegradation
The products of degradation are more toxic.

Section 13. Disposal Considerations

Waste Disposal
Recycle, if possible. Consult your local or regional authorities.

Section 14. Transport Information

DOT Classification
Not a DOT controlled material (United States).

Proper Shipping Name
Not applicable.

DOT Identification Number
Not applicable.

Packing Group
Not applicable.

Hazardous Substances
Not available.

Special Provisions for Transport
Not applicable.

TDG Classification
Not controlled under TDG (Canada).

IMDG Classification
Not controlled under IMDG.

IATA Classification
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 mice), which would require a warning under the statute.

Rhode Island RTK hazardous substances: Lead, Tin
Pennsylvania RTK Indicant: Lead, Tin
Rhode Island: Indicant: Lead, Tin
Michigan air quality: lead
Massachusetts RTK Indicant: Lead, Tin
New Jersey Lead, Tin

TSCA Inventory: Sbemic Indicant: Lead, Tin
SARA 311/312 MSDS distribution - chemical inventory, hazard identification, lead, delayed health hazard, SARA 313 toxic chemical registration and release limiting: 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

WEMIS (Canada) RH-MG CLASS D-24: Material causing other toxic effects (very toxic).
DSCL (DEC) R53: Danger of cumulative effects.
R51: May cause harm to the unborn child.
R52: Possible risk of impaired fertility.
R20/22: Harmful by inhalation and if swallowed.

Section 16. Other Information

WEMS (U.S.A.)

<table>
<thead>
<tr>
<th></th>
<th>National Fire Protection Association (U.S.A.)</th>
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</tr>
</tbody>
</table>

Readability 0

Personal Protection j

References


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 INCLUDED IN THIS SAFETY DOCUMENT.

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

VERIFIED BY C. Cassida.
Printed 8/30/99.

USA: Inforam (800)335-5037
INTERNATIONAL: Inforam (781)881-1800
CANADA: not available

Notice to Reader

Before using this product, read and understand the precautions and warnings. This product is not hazardous when used according to these instructions. It is the user's responsibility to ensure that all users are properly trained and familiar with the product. The user should take all necessary precautions to prevent accidents and injuries. It is the user's responsibility to ensure that all equipment is properly maintained and that all users are properly trained and familiar with the product. It is the user's responsibility to ensure that all equipment is properly maintained and that all users are properly trained and familiar with the product.
### Section I. Product Identification and Uses

**Chemical name:** Sn63 291AX  
**Synonyms:** Sn63Pb37.291AX solder paste  
**Chemical formula:** SnPb (metal)  
**Chemical family:** Metallic/organic medium (lead-containing metal)  
**Supplier:** A.M. INC.  
910 Henri-Bourassa est, Montreal, Quebec, H1E 2S4  
(514) 844-2000  
**Material uses:** Industrial applications: Electronics industry, Soldering

### Section IA. First Aid Measures

**Eye contact:** Fumes may cause eye irritation. Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Irritation persists, seek medical attention.

**Skin contact:** Prolonged and repeated contact with skin may cause irritation. Wash gently and thoroughly with water and soap. If irritation persists, seek medical attention.

**Hazardous skin contact:** MOLTEN METAL causes SEVERE BURNS! In case of BURNS, DO NOT USE WATER. Cover with antiseptic ointment and sterile gauze. Seek IMMEDIATE medical attention.

**Inhalation:** Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

**Ingestion:** Harmful if inhaled. Evacuate the victim to a safe area as soon as possible. If the victim is not breathing, perform mouth-to-mouth resuscitation. SEEK IMMEDIATE MEDICAL ATTENTION.

**Ingestion:** Remove clothing if any. Have conscious person drink several glasses of water or milk. INDUCE VOMITING by sucking fingers in throat. Lower the head so that the vomit will not enter the mouth and throat. NEVER give an unconscious person anything by mouth. Seek medical attention.

**Inhalation:** Fumes harmful if ingested. SEEK IMMEDIATE MEDICAL ATTENTION.

### Section II. Hazardous Ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS #</th>
<th>% by Weight</th>
<th>TLV/TDI</th>
<th>LC50/LE01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>7439-92-1</td>
<td>31.0-35.0</td>
<td>TWL: 0.05 (mg/m³)</td>
<td>Not available</td>
</tr>
<tr>
<td>Dibutylzinc diethyl ether</td>
<td>112-73-2</td>
<td>1.00</td>
<td>ADI: 0.05 (mg/kg)</td>
<td>0.04L (LD50), mg/kg Acute: 3500 (rat)</td>
</tr>
</tbody>
</table>

### Section III. Physical Data

- **Form state:** Solid (Paste)  
- **pH:** Not applicable  
- **Melting point:** 183°C (361°F) based on metal alloy  
- **Ash weight:** 200°C (392°F)  

**continued on next page**
### Section IV. Fire and Explosion Data

- **Product:** Combustible.
- **Autoignition temperature:** Not available.
- **Fire degradation products:** These products are carbon oxides (CO, CO₂), some metallic oxides.
- **Flash point:** Not available.
- **Flammable limits:** Not available.
- **Fire extinguishing media:** SMALL FIRE: Use DRY chemicals, CO₂, water spray or foam. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.
- **Hazardous properties:** Slightly flammable in presence of air.
  - Very slightly flammable in presence of open flame and sparks, of heat, of oxidizing materials.
  - Non-flammable in presence of flames, of reducing materials, of combustible materials, of organic materials, of metals, of acids, of alcohols.
- **Fabrication:** Metalic part of product is nonflammable. The organic part may be flammable if exposed to direct flame.
- **Halo of explosion:** Risk of explosion of the product in presence of static discharge: Not available. Non-explosive in presence of atmospheres of heat.
- **Remark:** No additional remark.

### Section V. Reactivity Data

- **Stability:** The product is stable.
- **Hazardous decomposition products:** Not available.
- **Peroxidation:** Not available.
- **Products of degradation:** These products are carbon oxides (CO, CO₂). Some metallic oxides.
- **Remark:** No additional remark.

**Continued on Next Page**
Slightly corrosive in presence of copper.
Non-corrosive in presence of glass, of steel, of aluminium, of zinc, of stainless steel (304), of stainless steel (316).

Remark
No additional remark.

Slight, reactive with oxidizing agents, acids, alkalis.

Remark
Incompatible with halogen and halogen compounds. (Toxic)

Section VI. Toxicological Properties

List of entry
Ingestion, inhalation.

TLV
Lead
TWA: 0.05 (mg/m³) from OSHA/VOSH (1982)
TWA: 0.05 (mg/m³) from ACGIH (1991)

Th
TWA: 2 (mg/m³) from ACGIH (1983)

 consult local authorities for acceptable exposure limits.

Toxicity to animals
Not available.

Remark
For additional remark:

Chronic effects in humans
FUMES: Extremely dangerous in case of ingestion, of inhalation. Very dangerous in case of eye contact (irritant).
Slightly dangerous in case of skin contact (irritant, sensitizing).
CARCINOGENIC EFFECTS: Classified 3A by IARC [Leuk] MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Classified 3A by IARC [Lead]. The substance is toxic to lungs, liver and reproductive system. Repeated or prolonged exposure to the substance may produce liver damage.

Remark
Overexposure to fumes may cause severe irritation to the respiratory tract and to the eyes. Overexposure to the fumes may result in bradypnea (asthenia).

Acute effects in humans
FUMES: Very dangerous in case of ingestion, of inhalation. Very dangerous in case of eye contact (irritant).
Slightly dangerous in case of skin contact (irritant, sensitizing).
The product may irritate eyes and skin upon contact. Irritation of the eye is characterized by redness, watering, and itching.

Remark
Contact with skin can cause irritation. Contact with eyes can cause irritation. Fumes may irritate eyes, digestive system and respiratory tract.

Section VII. Preventive Measures

Waste disposal
Recycle to paper, if possible. Contact your local or regional authorities.

Storage
Keep out of reach of children. Keep in a cool place. Carcinogenic, flammable or otherwise hazardous materials should be stored in a separate locked safety storage cabinet or room.

Precautions
Keep locked up. Keep away from heat. Keep away from sources of ignition. DO NOT ingest. Do not breathe dust. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatible materials as oxidizing agents, acids, alkalis.

Small spill accidents
Follow the spill control procedures outlined in the spill control manual. Spill may be cleaned up using water. NOTE: Metal, let soil before picking up and spilling to process or recycling. OTHER: Use appropriate tools in picking up the spill solid in a container, covered with this product.

Large spill accidents
Spill may be cleaned up using water. NOTE: Metal, let soil before picking up and spilling to process or recycling. OTHER: Use appropriate tools in picking up the spill solid in a container, covered with this product.

Protective clothing in case of large spill
Splash goggles. Full face. Dust respirator. Boots. Gloves. A sealed, contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing may not be sufficient; consult a specialist BEFORE handling this product.

Continued on Next Page
Section VIII. Classification

NOT
Not a DOT controlled material (United States).

Not applicable (RM and PG).

Remark
Not applicable.

BCS
HCS CLASS: DANGEROUS MAY CAUSE CANCER.
HCS CLASS: Inhalation substance.
HCS CLASS: Target organ effects.

Remark
No additional remark.

Section IX. Protective Clothing

Splash goggles. Lab coat. Gloves (disposable, vinyl). Face respirator. Dust respirator. Be sure to use a MH/NIOSH-approved respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Section X. Other Information

References

OSHA: Hazardous by definition of Hazard Communication Standard 29 CFR 1910 (1985). The following components of the product listed subject to the reporting requirements of section 313 of Title III of SARA (Superfund Amendments and Reauthorization Act, 1986) and 40 CFR Part 372. 1540: This product is not regulated as hazardous by DOT, IAC, or IATA. - TSCA (Toxic Substance Control Act): The components of this product that are listed on the TSCA Inventory. 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. Gaudin on 01189.

Emergency phone: Infotrac (800)535-5053 (USA), (708)918-1908 (International); (514)694-2000 (Canada)