



Material Safety Data Sheet

Section 1. Product and Company Identification

Common Name	Alloy SAC 305	Code	Not available
Product type	Metal alloy	Validation Date	2004-08-30
Synonym	Alloy LF 218	Version number	2
Material Uses	Industrial applications: Soldering		
Supplier	AIM	In Case of Emergency INFOTRAC (North America): (800) 535-5053 (International): (352) 323-3500	
Manufacturer	AIM		

Section 2. Hazardous Components

Name	CAS #	% by Weight	Toxicity Data (LC50/LD50, TLV)
1) Tin	7440-31-5	96.5	TWA: 2 (mg/m ³) from OSHA (PEL) [United States] [1997] <u>INHALATION</u> Respirable. TWA: 2 (mg/m ³) from ACGIH (TLV) [United States] [1994] <u>INHALATION</u> Respirable.
2) Silver	7440-22-4	3	TWA: 0.1 (mg/m ³) from ACGIH (TLV) [United States] [1994] <u>INHALATION</u>

Section 3. Hazards Identification

Physical State and Appearance	Solid.
Emergency Overview	WARNING!! Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling.
Routes of Entry	Inhalation. Ingestion.
Potential Acute Health Effects	Eyes This product may be hazardous in case of eye contact (irritant). Skin This product may be hazardous in case of skin contact (irritant, sensitizer). Inhalation Fumes and/or dusts produced by this product may be hazardous in case of inhalation. Ingestion This product may be hazardous in case of ingestion.
Potential Chronic Health Effects	Chronic effects: Chronic effects: Fumes and/or dusts produced by this product may be hazardous in case of ingestion, of inhalation. This product may be hazardous in case of skin contact (irritant, sensitizer), of eye contact (irritant). Non-corrosive for skin. Non-permeator by skin.
Medical Conditions Aggravated by Overexposure:	Repeated or prolonged exposure is not known to aggravate medical condition.
Overexposure /Signs/Symptoms	Not available.
See Toxicological Information (section 11)	

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Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Skin Contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Hazardous Skin Contact	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Hazardous Inhalation	Not available.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
Hazardous Ingestion	Not available.
Notes to Physician	Not available.

Section 5. Fire Fighting Measures

Flammability of the Product	Non-flammable.
Auto-Ignition Temperature	Not applicable.
Flash Points	Not applicable.
Flammable Limits	Not applicable.
Products of Combustion	Not available.
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 shocks.
Fire Fighting Media and Instructions	Not applicable.
Protective Clothing (Fire)	Not applicable.
Special Remarks on Fire Hazards	Not available.
Special Remarks on Explosion Hazards	Not available.

Section 6. Accidental Release Measures

Small Spill and Leak	Use appropriate tools 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 local and regional authority requirements.
Large Spill and Leak	Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7. Handling and Storage

Handling	Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls, Personal Protection

Engineering Controls 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.

Personal Protection

Eyes Splash goggles.

Body Lab coat.

Respiratory Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Hands Gloves.

Feet Not applicable.

* **Note:** Suggested protective clothing may not be adequate for a specific process. Consult a specialist before using.

Personal Protection in Case of a Large Spill 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.

Product Name

- 1) TIN
- 2) SILVER

Exposure Limits

TWA: 2 (mg/m³) from OSHA (PEL) [United States] [1997] INHALATION Respirable.
TWA: 2 (mg/m³) from ACGIH (TLV) [United States] [1994] INHALATION Respirable.
TWA: 0.1 (mg/m³) from ACGIH (TLV) [United States] [1994] INHALATION

Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Solid.	Odor	Not available.
Molecular Weight	Not applicable.	Taste	Not available.
Chemical formula	Not applicable.	Color	silver-grey
pH (1% Soln/Water)	Not applicable.	Specific Gravity	Weighted average: 7.38 (Water = 1)
Acid Value (IPC TM-650, 2.3.13)	Not available.		
Boiling/Condensation Point	Not available.		
Melting/Freezing Point	217-218 C		
Critical Temperature	Not available.		
Vapor Pressure	Not applicable.		
Vapor Density	Not available.		
Volatility	Not available.		
Odor Threshold	Not available.		
Evaporation Rate	Not available.		

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VOC	Not available.
Viscosity	Not available.
LogK _{ow}	The product is insoluble in water and oil.
Ionicity (in Water)	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 Comments	Not available.

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Conditions of Instability	Stable in normal conditions. Over melting point, will emit toxic tin oxides. (Tin)
Incompatibility with Various Substances	Slightly reactive with oxidizing agents, acids, moisture.
Hazardous Decomposition Products	Not available.
Hazardous Polymerization	Will not occur.
Corrosivity	Not considered to be corrosive for metals and glass according to our database.
Special Remarks on Corrosivity	Not available.

Section 11. Toxicological Information

Toxic and Chronic Effects on Humans	<p>Fumes and/or dusts produced by this product may be hazardous in case of ingestion, of inhalation. This product may be hazardous in case of skin contact (irritant, sensitizer), of eye contact (irritant). Non-corrosive for skin. Non-permeator by skin.</p> <p>CARCINOGENIC EFFECTS: Classified NONE by NIOSH [Tin]. Classified NONE by NIOSH [Silver]. Classified NONE by NIOSH [Copper].</p> <p>MUTAGENIC EFFECTSNot available.</p> <p>TERATOGENIC EFFECTSNot available.</p> <p>DEVELOPMENTAL TOXICITYNot available.</p> <p>The product may be toxic to kidneys, lungs, liver, mucous membranes, upper respiratory tract, skin, eye, lens or cornea.</p> <p>Repeated or prolonged exposure to the substance can produce target organs damage.</p>
Toxicity to Animals	<p>LD50: Not available.</p> <p>LC50: Not available.</p>
Special Remarks on Chronic Effects on Humans	Prolonged and repeated exposure to tin oxide fumes may result in benign pneumoconiosis (stannosis). (Tin)
Special Remarks on Other Toxic Effects on Humans	<p>MOLTEN METAL can cause severe BURNS!</p> <p>Fumes and dust may irritate eyes, digestive system and respiratory tract.</p> <p>(Tin)</p>
Special Remarks on Toxicity to Animals	No additional remark. (Tin)


Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Biodegradable/OECD	Not available.
Mobility	Not available. Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	The product itself and its products of degradation are not toxic.
Special Remarks on the Products of Biodegradation	Not available.

Section 13. Disposal Considerations

Waste Information	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
Waste Stream	Not available.
Consult your local or regional authorities.	

Section 14. Transport Information

DOT Classification	Not a DOT controlled material (United States).	
	Not regulated	
Special Provisions for Transport	Not applicable.	
Special Provisions for Transport		
IMO/IMDG Classification	Not controlled under IMDG.	
Marine Pollutant	Not available.	
ADR/RID Classification	Not controlled under ADR (Europe).	
ICAO/IATA Classification	Not controlled under IATA.	

Section 15. Regulatory Information

HCS Classification	Class: Sensitizing substance. Class: Target organ effects.
U.S. Federal Regulations	TSCA 8(a) PAIR: Silver TSCA inventory: Tin; Silver; Copper SARA 302/304/311/312 extremely hazardous substances: No products were found. SARA 302/304 emergency planning and notification: No products were found. SARA 302/304/311/312 hazardous chemicals: Tin; Silver; Copper SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Tin: immediate health hazard; Silver: immediate health hazard; Copper: immediate health hazard SARA 313 toxic chemical notification and release reporting: Silver: 1%; Copper: 1% Clean water act (CWA) 307: Silver; Copper Clean water act (CWA) 311: No products were found.

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Clean air act (CAA) 112 accidental release prevention: No products were found.
 Clean air act (CAA) 112 regulated flammable substances: No products were found.
 Clean air act (CAA) 112 regulated toxic substances: No products were found.

State Regulations

Rhode Island RTK hazardous substances: Tin
 Pennsylvania RTK: Tin: (generic environmental hazard); Silver: (environmental hazard, generic environmental hazard); Copper: (environmental hazard)
 Florida: Tin; Silver
 Minnesota: Tin; Silver
 Michigan critical material: Silver
 Massachusetts RTK: Tin; Silver; Copper
 New Jersey: Tin; Silver; Copper
 New Jersey spill list: Tin
 California prop. 65: No products were found.

International Regulations

EINECS Not available.

DSCL (EEC) 36/38- Irritating to eyes and skin.
 43- May cause sensitization by skin contact.

International Lists Australia (NICNAS): Tin; Silver; Copper
 Korea (TCCL): Tin; Silver; Copper
 Philippines (RA6969): Tin; Silver; Copper

Section 16. Other Information

Hazardous Material Information System (U.S.A.)

Health	*	1
Fire Hazard		0
Reactivity		1
Personal Protection		E

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



Label statements

CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: KIDNEYS, LUNGS, LIVER, MUCOUS MEMBRANES, RESPIRATORY TRACT, SKIN, CRYSTALLINE LENS OR CORNEA.
 MAY CAUSE EYE AND SKIN IRRITATION.
 MAY CAUSE ALLERGIC SKIN REACTION.

References Not available.

Other Special Considerations Not available.

Document Modifications

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