Material Safety Data Sheet

Section 1. Product and Company Identification

Common Name	**Sn63/Pb37 209AXT/NC**
Product type	**Cored wire (No Clean)**
Synonym	Not available.
Material Uses	Metal industry: Soldering.
Supplier	AIM
Manufacturer	AIM 9100 Henri-Bourassa east Montreal, Quebec, Canada, H1E 2S4, (514) 494-2000

Code	Not available.
Validation Date	**10/18/2001**
Version Number	**4**

In Case of Emergency **INFOTRAC**
(North America): (800) 535-5053
(International): (352) 323-3500

Section 2. Hazardous Components

Name	CAS #	% by Weight	Toxicity Data (*LC50/LD50, TLV*)
1) Tin	7440-31-5	60-63	TWA: 2 (mg/m^3) from OSHA (PEL) [United States] [1997] INHALATION Respirable. TWA: 2 (mg/m^3) from ACGIH (TLV) [United States] [1994] INHALATION Respirable.
2) LEAD	7439-92-1	35-37	TWA: 0.05 (mg/m^3) from ACGIH (TLV) [United States] [1995] INHALATION TWA: <0.1 (ppm) from NIOSH INHALATION Respirable.
3) Modified rosin	65997-06-0	0.2-3.8	ORAL (LD50): Acute: 8400 mg/kg [Rat]. 5000 mg/kg [Guinea pig].

Section 3. Hazards Identification

Physical State and Appearance	Solid. (Cored metal wire)
Emergency Overview	WARNING!
	Risk of cancer depends on duration and level of exposure. Avoid contact with eyes, skin and clothing. DO NOT ingest. Avoid breathing dust. Avoid prolonged or repeated contact with skin. Keep container closed. Use only with adequate ventilation. Avoid exposure during pregnancy. 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). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.
Inhalation	Fumes and/or dusts produced by this product may be hazardous in case of inhalation (lung irritant).
Ingestion	Fumes and/or dusts produced by this product may be hazardous in case of ingestion.
Potential Chronic Health Effects	No additional information.
Medical Conditions Aggravated by Overexposure:	Repeated exposure to toxic material may produce general deterioration of health by an accumulation in one or many human organs.

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Overexposure /Signs/Symptoms	Not available.
See Toxicological Information (section 11)	

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	MOLTEN METAL can cause SEVERE BURNS! In case of BURNS: DO NOT USE WATER. Cover with antiseptic ointment and steril gauze. Seek IMMEDIATE 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	No additional information.
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	No additional information.
Notes to Physician	Not available.

Section 5. Fire Fighting Measures

Flammability of the Product	May be combustible at high temperature.
Auto-Ignition Temperature	Not available.
Flash Points	Not available.
Flammable Limits	Not available.
Products of Combustion	Not available.
Fire Hazards in Presence of Various Substances	Combustible in presence of open flames. Non-flammable in presence of shocks, of oxidizing materials, of reducing materials, of combustible materials, of organic materials, of metals, of acids, of alkalis, of moisture.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of static discharge: Not available. Non-explosive in presence of shocks, of heat.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.
Protective Clothing (Fire)	Not applicable.
Special Remarks on Fire Hazards	Massive metal is nonflammable. Flux core will burn on contact with direct flame.
Special Remarks on Explosion Hazards	No additional remark.

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Section 6. Accidental Release Measures

Small Spill and Leak	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.
Large Spill and Leak	Our data base contains no additional information in case of a spill and/or a leak of the product.

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 and eyes. After handling, always wash hands thoroughly with soap and water.
Storage	Keep container dry and tightly closed. Keep in a cool, well-ventilated place. Highly toxic or infectious materials should be stored in a separate locked safety storage cabinet or room.

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	safety glasses or splash goggles;
Body	Lab coat.
Respiratory	Wear appropriate respirator when ventilation is inadequate. Be sure to use a MSHA/NIOSH approved respirator or equivalent.
Hands	gloves (suitable to the operation)
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	No additional information

Product Name	**Exposure Limits**
No hazardous ingredients.	

Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Solid. (Cored metal wire)
Molecular Weight	Not applicable.
Chemical formula	Not applicable.
pH (1% Soln/Water)	Not applicable.

Odor	Odorless.
Taste	Not applicable.
Color	Silver-grey.
Specific Gravity	Weighted average: 7.42 (Water = 1)

Acid Value (IPC TM-650, 2.3.13)	Not available.
Boiling/Condensation Point	Not available.
Melting/Freezing Point	Weighted average: 263.48°C (506.3°F)
Critical Temperature	Not available.

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Vapor Pressure	Not available
Vapor Density	Not available.
Volatility	Not available.
Odor Threshold	Not available.
Evaporation Rate	not available
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	Over melting point, toxic metallic oxides may be evolved. A small amount of organic fumes may also be evolved.
Incompatibility with Various Substances	Slightly reactive with oxidizing agents, metals, acids, moisture.
Hazardous Decomposition Products	Not available.
Hazardous Polymerization	No.
Corrosivity	Non-corrosive in presence of glass, of steel, of aluminum, of zinc, of stainless steel(304), of stainless steel(316).
Special Remarks on Corrosivity	Organic base core in a solder wire has the primary task of cleaning a metal surface (remove and prevent oxidation) to improve bonding with the solder.

Section 11. Toxicological Information

Toxic and Chronic Effects on Humans	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). **CARCINOGENIC EFFECTS**: [LEAD]: Classified A3 (Proven for animal) by ACGIH, 2B (Possible for human) by IARC. **MUTAGENIC EFFECTS**: Not available. **TERATOGENIC EFFECTS**: Not available. **DEVELOPMENTAL TOXICITY**: PROVEN [Lead] The product may be toxic to lungs, upper respiratory tract, skin, eyes, blood, kidneys, the nervous system, the reproductive system, spleen, brain, digestive system, gastro-intestinal tract. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a toxic material may produce general deterioration of health by an accumulation in one or many human organs.
Toxicity to Animals	No specific information is available in our data base regarding the toxicity to animals.
Special Remarks on Chronic Effects on Humans	

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	Human: LEAD crosses the placental barrier. CHRONIC OVEREXPOSURE EFFECTS; Increase of LEAD LEVEL in blood, muscle soreness, metallic taste, abdominal cramps, headaches. Overexposure to fumes may cause severe irritation to the respiratory tract, digestive system and to the eyes. Overexposure to tin oxide fumes may result in benigne pneumoconiosis (stannosis). Repeated and prolonged contact with bare skin may cause irritation, dermatitis and/or an allergic reaction (sensitization) in susceptible individuals.
Special Remarks on Other Toxic Effects on Humans	Inhalation of smoke and fumes, at high temperatures, may cause an asthmatic reaction in some individuals. MOLTEN METAL can cause severe BURNS! *If this product is heated to temperatures sufficient to produce smoke or fumes, the TLV-TWA of 0.1 mg/m3 (as formaldehyde, as per ACGIH), for rosin core pyrolysis products should be observed.
Special Remarks on Toxicity to Animals	No additional remark.

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 products of degradation are more toxic.
Special Remarks on the Products of Biodegradation	No additional remark.

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 available.	
Special Provisions for Transport	Not applicable.	
Special Provisions for Transport		
IMO/IMDG Classification	Not controlled under IMDG.	
Marine Pollutant	Not available.	

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ADR/RID Classification	Not controlled under ADR (Europe).
ICAO/IATA Classification	Not controlled under IATA.

Section 15. Regulatory Information

HCS Classification	HCS CLASS: Sensitizing substance. HCS CLASS: Target organ effects.
U.S. Federal Regulations	TSCA inventory: ALL COMPONENTS 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: No products were found. SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Lead: delayed health hazard SARA 313 toxic chemical notification and release reporting: Lead: 0.1% Clean water act (CWA) 307: No products were found. Clean water act (CWA) 311: No products were found. 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; Lead Pennsylvania RTK: Tin; Lead Florida: Tin; Lead Minnesota: Tin; Lead Michigan critical material: Lead Massachusetts RTK: Tin; Lead New Jersey: Tin; Lead New Jersey spill list: Tin California prop. 65: This product contains **LEAD** for which the State of California has found to cause cancer, birth defects or other reproductive harm (male, female), which would require a warning under the statute. **(no significant risk level):LEAD**: 0.0005 mg/day (inhalation)
International Regulations	
EINECS	Not available.
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.
International Lists	No products were found.

Section 16. Other Information

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

Health	*	1
Fire Hazard		1
Reactivity		0
Personal Protection		E

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

Label statements

CANCER HAZARD
CONTAINS MATERIAL WHICH CAN CAUSE CANCER
BIRTH DEFECT HAZARD
CONTAINS MATERIAL WHICH CAN CAUSE BIRTH DEFECT.
CAUSES SEVERE RESPIRATORY TRACT IRRITATION.
CAUSES DAMAGE TO THE FOLLOWING ORGANS: BLOOD, KIDNEYS, LUNGS, NERVOUS SYSTEM, REPRODUCTIVE SYSTEM, SPLEEN, BRAIN, DIGESTIVE SYSTEM, GASTROINTESTINAL TRACT, RESPIRATORY TRACT, SKIN, EYES.

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MAY BE HARMFUL IF INHALED OR SWALLOWED.
MAY CAUSE EYE AND SKIN IRRITATION.
MAY CAUSE ALLERGIC SKIN REACTION.

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. -CHEMTOX database -Components' manufacturer's Material Safety Data Sheet. -CRC Handbook of chemistry and physics, 67 th edition, CRC Press inc., Boca Raton, Florida. -CSST (Comission de Santé et Sécurité au Travail), document #RT-12: Classification of Certain Chemical Substances. -IATA, Dangerous Goods Regulations, 37th edition (January 1, 1996) -NFPA, Fire Protection Guide to Chemical Hazards, 11th edition. -NIOSH, Pocket Guide to Chemical Hazards, revision June 1994. Sigma-Alrich handbook of fine chemicals, 1998 -TSCA (Toxic Substance Contral Act), Chemical Substance Inventory List, 1985.

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.

Document Modifications

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Verified by P. Diallo.

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