CANADA METAL (PACIFIC) LTD.

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Safety Data Sheet

SECTION 1. IDENTIFICATION

Product Name: 97/3 Solder

Chemical Family: Tin Based Alloy

Supplier: Canada Metal Pacific Ltd.

Address: 7733 Progress Way, Delta, BC Canada V4G 4A3

Phone: 604-940-2010

Fax: 604-952-2650

SECTION 2. HAZARD IDENTIFICATION

Classification: Not classified.

Dangerous Nature: Not classified.

Hazardous Nature: Molten material will produce thermal burns.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration
Tin	7440-31-5	Balance
Copper	7440-50-8	2.50 – 3.50%

SECTION 4. FIRST-AID MEASURES

Inhalation: Tin oxide dust / fumes leads to benign pneumoconiosis without symptoms or interference to breathing. Smoke during soldering may cause headache and breathing difficulty in some cases. Move exposed individual to fresh air. Seek medical advice if discomfort and irritation persist.

Eye Contact: Eye irritant. Immediately flush eye with cool clean water for 15 - 20 minutes. Molten metal may splash into eye and cause severe burns. If eye irritation persists, seek immediate treatment from a physician.

Ingestion: If ingested, give 1-2 glasses of milk or water. Induce vomiting if victim not convulsed. May cause diarrhea, nausea, vomiting, abdominal pain or headache. Seek medical aid or call poison control.

Skin Contact: Possible skin irritations. Wash affected area well with water and soap.

Effects of Acute Exposure: See "Ingestion Effects" and "Inhalation Effects".

Effects of Chronic Exposure: May cause diarrhea, nausea, vomiting, abdominal pain or headache.

SECTION 5. FIRE-FIGHTING MEASURES

To extinguish: Use dry chemical, foam or carbon dioxide. Use self-sustaining respiratory suit. May release toxic metal and oxide fumes. Solid metal is not flammable, however, fine metallic dust may form an explosive mixture with air. For serious fires, call the fire department immediately.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in Case Material is Released or Spilled: If spill or dust use clean-up methods which avoid dust generation. Use wet weeping or use a vacuum. Collect

material and place in a sealable container for disposal. Wash hands and arms well after clean-up is completed. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation.

Prevent entry into waterways, sewers and confined areas.

Respiratory Protection: Use appropriate NIOSH approved respirators especially in unventilated and small enclosed areas.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling: Wash hands and arms well after handling. Adequate ventilation and respiratory protection should be used.

The metal itself presents no health hazards unless it is heated or ground as fumes may be generated.

Eye: Safety glasses must be worn.

Gloves: May use any protective gloves.

Hygiene: Wash hands with soap after handling.

Storage: Store in a cool, dry, well ventilated area. Store in a closed corrosive resistant container with corrosive resistant liner.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH® TLV®		OSHA PEL	
	TWA	STEL	TWA	STEL
Tin	2.0 mg/m3	N/A	2.0 mg/m3	N/A
Copper	1.00 mg/m3	N/A	1.00 mg/m3	N/A

Notes: Above is the USA occupational Safety and Health Administration Standard. Based on 8 Hr/Day x 5 Day/Week will be considered long term exposure.

Appropriate Engineering Controls: Avoid prolonged exposure. Local exhaust ventilation may be needed to control fume.

Individual Protection Measures

Eye: Safety glasses must be worn. Face shield if molten.

Gloves: May use any protective gloves.

Heat resistant leggings and gloves if pouring molten metal.

Respiratory Protection: Use an appropriate fume/dust respirator if ambient levels approach the exposure limits. Appropriate NIOSH approved respirators especially in unventilated and small enclosed areas.

Hygiene: Wash hands with soap after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: metallic silver gray

Form: bar, ingot, wire

Odour: None

Melting Point: 227 - 250 degrees celsius

Flash Point: Not Pertinent

Auto-ignition Temperature: Not Pertinent

Flammability: Not Pertinent

Relative Density (water = 1): 7.34

Solubility in Water: Not soluble.

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability: Stable

Reactive Subject	Chemical Reaction
Liquid	No
Heat	No
Acid	No

Strong Oxidizing Agent	No
Alkaline Compound	No

Conditions to Avoid: **avoid molten metal contact with water.**

Incompatible Materials: chlorine, turpentine, magnesium, acetylene gas.

Hazardous Decomposition Products: Toxic metal oxide fumes will form at high temperature.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

X Inhalation __ Skin contact __ Eye contact **X** Ingestion

Acute Toxicity: Inhalation of fume may cause headache and breathing difficulty in some cases. High concentration of fumes / dust of metal oxides can produce symptoms of metal fume fever. Overexposure of Tin can cause irritation of the eyes, skin, mucous membranes and respiratory system Acute overexposure to copper dust / fumes can cause irritation of the eyes, nose, throat and skin and under severe exposure can cause metal fume fever with flu-like symptoms such as dry throat, coughing, fever, chills, tight chest, dyspnea, headache, blurred vision, back pain, nausea, vomiting and fatigue. Symptoms usually disappear within 24 hours. Copper may cause skin and hair discoloration. Inhalation of copper dusts may change the gums and mucous lining of the mouth which is generally attributable to localized tissue effect rather than general toxicity.

Oral: Antimony 100 mg/kg LD50 Rat

Skin Corrosion / Irritation: Prolonged skin contact may cause temporary irritation.

Serious Eye Damage / Irritation: Eye contact may cause local eye irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure: Not classified.

Aspiration Hazard: Inhalation of fume may cause irritation.

STOT (Specific Target Organ Toxicity) - Repeated Exposure: Not classified.

Respirator and/or Skin Sensitization: No

Carcinogenicity: This product is not considered to be a carcinogen.

Reproductive Toxicity: No

Development of Offspring: No

Sexual Function and Fertility: No

Effects on or via Lactation: No

Germ Cell Mutagenicity: No

Interactive Effects: No

Chronic effects: Prolonged and repeated overexposure to dust and fumes can lead to benign pneumoconiosis (stannosis). Overexposure to Tin can lead to benign pneumoconiosis (stannous). This form of pneumoconiosis produces progressive x-ray changes of the lungs as long as exposure exists, but there is no distinctive fibrosis, no evidence of disability and no special complicating factors.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity: alloys in massive forms present a limited hazard for the environment.

Persistence and Degradability: no data

Bioaccumulative Potential: no data

Mobility in Soil: alloys in massive form is not mobile in the environment.

Other Adverse Effects: no data

SECTION 13. DISPOSAL CONSIDERATION

Waste Disposal Method: Do not dispose of into municipal garbage, landfill sites, sewers, or any body of water.

Return to manufacturer, scrap dealer, or secondary lead smelter.

Consult federal state / provincial and local regulations regarding the proper disposal of waste material.

SECTION 14. TRANSPORT INFORMATION

Material is not considered hazardous for transportation.

SECTION 15. REGULATORY INFORMATION

WHMIS Classification **D-2A**

SECTION 16. OTHER INFORMATION

Disclaimer: The Safety Data Sheet must be used and followed according to the corresponding actions stated above. All information is given in good faith as authoritative and valid as known to the Company, but because new information may be available, the Company cannot guarantee all relevant information is contained.

The Safety Data Sheet is based on normal usage and actions regarding the subject material. During specialized, unusual or new form of usage, execute further safety measures as necessary prior to handling.

The use of the product in non-conformance with this Safety Data Sheet, or in combination with any other product or process is the responsibility of the user.

Date of Latest Revision: March , 2017