CANADA METAL (PACIFIC) LTD.

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Safety Data Sheet

SECTION 1. IDENTIFICATION

Product Name: Sil_Pure Lead Free 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: Not classified.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration
Tin	7440-31-5	Balance
Copper	7440-50-8	3 – 5%
Silver	7440-22-4	0.25 – 0.75%

SECTION 4. FIRST-AID MEASURES

Inhalation: 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. Tin oxide dust/fumes leads to benign pneumoconiosis without symptoms of interference to breathing.

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

Skin Contact: Not considered a significant risk in this application. Wash affected area well with water and soap.

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

Effects of Chronic Exposure: Possible skin dermatitis and nasal inflammation.

SECTION 5. FIRE-FIGHTING MEASURES

To extinguish: Use dry chemical. This product is non-flammable and non-explosive. When present in fire, may emit fumes of the constituent metals or their oxides. For serious fires, call the fire department immediately. If firefighting, wear a self-contained breathing apparatus.

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 in appropriate container. 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, soil and confined areas.

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

Avoid contact with skin, eyes and mucous membranes.

SECTION 7. HANDLING AND STORAGE

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

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.

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	1.0 mg/m3	N/A	1.0 mg/m3	N/A
Silver	0.1 mg/m3	N/A	0.1 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: solid silver, metallic

Form: bar, ingot, wire

Odour: None

Melting Point: 227 - 260 degrees celsius

Flash Point: Not Pertinent

Auto-ignition Temperature: Not Pertinent

Flammability: Not Pertinent

Relative Density (water = 1): 7.35

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

Risk of Dangerous Reactions: silver and copper can form unstable acetylides in contact with acetylene gas.

Conditions to Avoid: **Control in the area any acids and oxidizing agents and heat.**

Incompatible Materials: Acetylene, ammonia, nitric acid, halogens, ethylene imine, ethylene oxide, chlorine trifluoride, sulfuric acid, peroxides, peroxyformic acid, oxalic acid, tartaric acid, 1-bromo-2-propyne, permonosulfuric acid, hydrazine mononitrate, hydrazoic acid, hydrogen sulfide, bromates, chlorates and iodates of alkali and alkali earth materials, cupric nitrate.

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.

Oral: Copper 3.5 mg/kg LD50 Rat

Silver 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,

conjunctivitis, ulceration of the cornea and or argyria, discoloration of the eyes and skin.

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

Aspiration Hazard: Inhalation of fume may cause respiratory irritation and shortness of breath.

STOT (Specific Target Organ Toxicity) - Repeated Exposure: Pre-existing pulmonary diseases such as bronchitis and asthma may be aggravated by inhalation overexposure.

Delayed effects from long-term overexposure: Aggravation of pre-existing diseases of the liver, kidneys and gastrointestinal system.

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

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity: Harmful to aquatic life with long lasting effects.

Persistence and Degradability: no data

Bioaccumulative Potential: no data

Mobility in Soil: no data

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 29, 2017