



## SAFETY DATA SHEET (SDS)

Solder Alloy Sn96.5Ag3Cu.5 (B2012 Flux Core)

Date: 1/31/2023

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Solder Alloy Sn96.5Cu.5Ag3 (B2012 Flux Core)

**CAS No:** 7440-31-5 Tin (Sn)

**Index No:**

**EC No:** 231-141-8

**CAS No:** 7440-50-8 Copper (Cu)

**Index number:**

**EC number:**

**CAS No:** 7440-22-4 Silver (Ag)

**Index number:**

**EC number:** 231-131-3

**CAS No:** 8050-09-7 Rosin

**Index No:**

**EC No:** 232-475-7

**RECOMMENDED USE:** Solder

#### Details of the supplier of the safety data sheet:

**MANUFACTURER**

Amerway Inc.  
3701 Beale Ave.,  
Altoona, PA 16601

**PHONE:** 814-944-0200

**FAX PHONE:** 814-944-1463

**EMERGENCY TELEPHONE NUMBER:**

**CHEMTREC:** 800-424-9300

**CHEMTREC (Outside US & Canada):** 703-527-3887

### SECTION 2: HAZARDS IDENTIFICATION

**CLASSIFICATION OF CHEMICAL:** This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

**GHS PICTOGRAMS:**



GHS07



GHS02



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**SIGNAL WORD:** Danger

**HAZARD STATEMENT:**

- H302** Harmful if swallowed.  
**H317** May cause allergic skin reaction.  
**H322** Harmful if inhaled.  
**H373** May cause damage to organs with prolonged or repeated exposure.

**PRECAUTIONARY STATEMENT:**

- P264** Wash face, hands and any exposed skin thoroughly after handling  
**P270** Do not eat, drink or smoke when using this product.  
**P271** Use only outdoors or in a well-ventilated area.  
**P281** Use personal protective equipment as required.

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### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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**INGREDIENT:**

<b><u>CAS NO.</u></b>	<b><u>DESCRIPTION</u></b>	<b><u>% WT</u></b>
7440-31-5	Tin (Sn)	95-97
7440-50-8	Copper (Cu)	0-1
7440-22-4	Silver (Ag)	3-4
8050-09-7	Rosin	1-3
	* Trade Secret	<0.6

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### SECTION 4: FIRST AID MEASURES

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**EMERGENCY OVERVIEW:** IF exposed or concerned: Get medical attention/advice

**POTENTIAL HEALTH EFFECTS FOLLOWING**

- EYE CONTACT:** Rinse immediately with plenty of water, also under eyelids, for at least 15 minutes.
- SKIN CONTACT:** Immediately wash with soap and water and rinse thoroughly, for at least 15 minutes.
- INGESTION:** Do not induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth
- INHALATION:** Remove victim to fresh air and keep at rest in a position comfortable for breathing.

**NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:** Treat symptomatically.

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### SECTION 5: FIRE-FIGHTING MEASURES

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**SUITABLE EXTINGUISHING MEDIA:** SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam.

**UNSUITABLE EXTINGUISHING MEDIA:** Do not use water jet.

**SPECIFIC HAZARDS ARISING FROM THE CHEMICAL:** May be combustible at high temperature. Keep product and empty container away from heat and sources of ignition.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal decomposition products include formaldehyde, acetone, methanol, aldehydes, carbon dioxide, carbon monoxide, methane, ethane, and acids.

**NFPA HAZARD CLASSIFICATION**



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HEALTH: 2 FLAMMABILITY: 1 REACTIVITY: 0



### HMIS HAZARD CLASSIFICATION

HEALTH: 2 FLAMMABILITY: 1 REACTIVITY: 0

HEALTH	2
FIRE	1
REACTIVITY	0

**SPECIAL FIRE FIGHTING EQUIPMENT/PROCEDURES:** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS AND PROTECTIVE EQUIPMENT:** Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation.

**ENVIRONMENTAL PRECAUTIONS:** Should not be released into the environment. Do not allow to enter sewers/surface or ground water. Do not flush into surface water or sanitary sewer system.

**CONTAINMENT AND CLEANUP:** Sweep up or vacuum up spillage and collect in suitable container for disposal. Keep in suitable, closed containers for disposal.

### SECTION 7: HANDLING AND STORAGE

**HANDLING:** Use only under a chemical fume hood. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

**STORAGE:** Keep containers tightly closed in a dry, cool and well-ventilated place.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### EXPOSURE GUIDELINES:

#### ROUTES OF EXPOSURE:

**EYES:** Dust or fume will be irritant.

**SKIN:** Irritant to skin and mucous membranes.

**INGESTION:** Ingestion of dust or fume must be avoided.

Tin is not regarded as toxic but excessive exposure can cause fever, nausea, stomach cramps or diarrhea. This product when used for welding and similar applications, produces chemicals known to cause cancer and birth defects (or reproductive harm). (California Health & Safety Code 25249.5 et seq).

**INHALATION:** Inhalation of dust and fumes must be avoided. This product, when used for welding and similar applications produces chemicals known to cause cancer and birth defects (or other reproductive harm). (California Health & Safety Code 25249.5 et seq).

**ENGINEERING CONTROLS:** Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

#### PERSONAL PROTECTIVE EQUIPMENT



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**SKIN AND BODY PROTECTION :** Wear appropriate protective gloves and clothing to prevent skin exposure.

**RESPIRATORY PROTECTION** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**EYE/FACE PROTECTION:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**WORK HYGIENIC PRACTICES:** Personnel must wash thoroughly after handling the metal before drinking, eating or smoking.

### EXPOSURE CONTROLS:

ACGIH TLV-TWA:	Tin	2mg/cu ACGIH 2mg/cu m (inorganic) OSHA 0/1mg/cu m (organic) OSHA
	Copper	0.1 mg/cu m ACGIH/OSHA
	Silver	0.1mg/cu ACGIH/OSHA
	Rosin	10mg/m3 as solid gum rosin (ACGHI)

### COMPONENTS WITH LIMIT VALUES THAT REQUIRE MONITORING AT THE WORKPLACE:

#### 7440-31-5 TIN (Sn)

PEL – Long term value: 2 mg/m3

REL – Long term value: 2 mg/m3

TLV – long term value: 2 mg/m3

#### 7440-50-8 Copper (Cu)

PEL – Long term value: mg/m3 (Not listed)

REL – Long term value: mg/m3 (Not listed)

TLV – long term value: mg/m3 (Not listed)

#### 7440-22-4 Silver (Ag)

PEL - Long term value: 0.01 mg/m3  
metal and soluble compounds (as Ag)

REL - Long term value: 0.01 mg/m3

TLV - Long term value: 0.01 mg/m3  
metal: dust and fume

#### 8050-09-7 Rosin

TLV – Long term value: 10 mg/m3 (as for Gum Rosin solid)

### NOTES:



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PEL= Permissible Exposure Limit (OSHA)

TLV= Threshold Limit Value (ACGIH)

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL STATE:** Solid

**APPEARANCE:** Silver grey

**ODOR:** Odorless

**ODOR THRESHOLD:**

**pH Value (-g/l):** N/A

**MELTING POINT/RANGE:** 183-238 °C (361-460 °F)

**BOILING POINT/RANGE:**

**FLASH POINT:**

**FREEZING POINT/RANGE:**

**EVAPORATION RATE:**

**FLAMMABILITY (SOLID, GAS):**

**FLAMMABILITY OR EXPLOSIVE LIMITS**

**UPPER:**

**LOWER:**

**VAPOR PRESSURE:** Not applicable

**VAPOR DENSITY:** Not applicable

**RELATIVE DENSITY:** at 20 °C (68 °F): 8.4 – 9.3 g/cm<sup>3</sup> (70.098 – 77.60 lbs/gal)

**SOLUBILITY IN WATER:** Insoluble

**PARTITION COEFFICIENT; N-OCTANOL/WATER:**

**AUTOIGNITION TEMPERATURE:**

**DECOMPOSITION TEMPERATURE:**

**VISCOSITY:**

**MOLECULAR FORMULA:**

**MOLECULAR WEIGHT:**

**SOLVENT CONTENT:** Organic solvents = 0/0%, Solid Content = 100.0%

### SECTION 10: STABILITY AND REACTIVITY

**REACTIVE HAZARD:**

**STABILITY:** Stable under normal conditions.

**HAZARDOUS REACTIONS:** None under normal processing.

**CONDITIONS TO AVOID:** Incompatible products. Excess heat. Avoid dust formation.

**INCOMPATIBILITY (MATERIAL TO AVOID):** Strong oxidizing agents, oxidizers,

**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:** Not available

**HAZARDOUS POLYMERIZATION:** Will not occur

### SECTION 11: TOXICOLOGICAL INFORMATION

**Acute Toxicity**

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Irritation** Hazardous in case of ingestion. Slightly hazardous in case of skin contact (irritant), of inhalation.

**Sensitization** No information available.

**Aspiration hazard** No information available.

**Symptoms / effects, both acute and delayed:** May cause damage to the following organs: lungs, skin.



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**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

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### SECTION 12: ECOLOGICAL INFORMATION

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**ECOTOXICITY:** No information available.

**PERSISTENCE AND DEGRADABILITY:** Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**BIOACCUMULATIVE POTENTIAL:** No information available.

**MOBILITY IN SOIL:** No information available.

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### SECTION 13: DISPOSAL CONSIDERATIONS

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**WASTE DISPOSAL METHODS:** Waste must be disposed of in accordance with federal, state and local environmental control regulations.

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### SECTION 14: TRANSPORT INFORMATION

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#### LAND TRANSPORT (DOT/ADR/RID)

**UN/NA NUMBER:** Not Regulated.

**UN PROPER SHIPPING NAME:** Not Regulated.

**TRANSPORT HAZARD CLASS(ES):** Not Regulated.

**PACKING GROUP:** Not Regulated.

#### INLAND WATERWAY TRANSPORT (ADN)

**UN/NA NUMBER:** Not Regulated.

**UN PROPER SHIPPING NAME:** Not Regulated.

**TRANSPORT HAZARD CLASS(ES):** Not Regulated.

**PACKING GROUP:** Not Regulated.

#### SEA TRANSPORT (IMDG)

**UN/NA NUMBER:** Not Regulated.

**UN PROPER SHIPPING NAME:** Not Regulated.

**TRANSPORT HAZARD CLASS(ES):** Not Regulated.

**PACKING GROUP:** Not Regulated.

#### AIR TRANSPORT (ICAO-TI/IATA-DGR)

**UN/NA NUMBER:** Not Regulated.

**UN PROPER SHIPPING NAME:** Not Regulated.

**TRANSPORT HAZARD CLASS(ES):** Not Regulated.

**PACKING GROUP:** Not Regulated.

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### SECTION 15: REGULATORY INFORMATION

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#### U.S. Federal Regulations

**TSCA 12(b)** All components listed for the subject finished product are on the TSCA Inventory of Chemical Substances and are not subject to any chemical specific regulation under TSAC Section 12(b) export notification requirements delineated at 40 CFR part 707, subpart D.

All ingredients are listed or exempt from listing.



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**SARA 313** Substance is listed.

### **SARA 311/312 Hazardous Categorization**

Acute Health Hazard  
Chronic Health Hazard  
Fire Hazard  
Sudden Release of Pressure Hazard  
Reactive Hazard

### **Proposition 65**

Chemicals known to cause cancer: None of the ingredients listed.  
Chemicals known to cause reproductive toxicity for females: None of the ingredients listed.  
Chemicals known to cause reproductive toxicity for males: None of the ingredients listed.  
Chemicals known to cause developmental toxicity: None of the ingredients listed.

### **Carcinogenic Categories**

EPA (Environmental Protection Agency):  
TLV (Threshold Limit Value established by ACGIH)

NIOSH-Ca (National Institute of Occupational Safety and Health)  
OSHA-Ca (Occupational Safety & Health Administration)

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## **SECTION 16: OTHER INFORMATION**

### **PREPARATION INFORMATION**

NAME: Terry Buck  
COMPANY: Amerway, Inc.  
EMAIL: tbuck@amerway.com

CREATION DATE: 01/01/2012  
REVISION DATE: 1/31/2023  
REVISION SUMMARY: This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

### **DISCLAIMER:**

This information is given in good faith, no warranty, express or implied is made. Amerway Inc. makes no representations and assumes no responsibility as to the accuracy, completeness or suitability of this data for any purchasers use. The data on this Safety Data Sheet relates only to this product and does not relate to use with any other material or in any process. All chemical products should be used only by, or under the direction of, technically qualified personnel who are aware of the hazards involved and the necessity for reasonable care in handling. Hazard communication regulations require that employees must be trained on how to use a Safety Data Sheet as a source for hazard information.

**End of SDS**