



## SAFETY DATA SHEET (SDS)

Solder Alloy Sn96Ag4

Date: 1/1/2020

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Solder Alloy Sn96Ag4

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

**Index No:**

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

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

**Index number:**

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

**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 nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

**GHS PICTOGRAMS:** None

**SIGNAL WORD:** None

**HAZARD STATEMENT:** None

**PRECAUTIONARY STATEMENT:**

**P264** Wash face, hands and any exposed skin thoroughly after handling

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### INGREDIENT:

<u>CAS NO.</u>	<u>DESCRIPTION</u>	<u>% WT</u>
7440-31-5	Tin (Sn)	93-98
7440-22-04	Silver (Ag)	2-7



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### SECTION 4: FIRST AID MEASURES

**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:** Call a physician immediately Clean mouth with water.

**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.

### SECTION 5: FIRE-FIGHTING MEASURES

**SUITABLE EXTINGUISHING MEDIA:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Silver is Noncombustible solid. Combustible only as fine dust. When heated to decomposition, may emit toxic fumes. In case of fire: Use a tri-class dry chemical fire extinguisher.

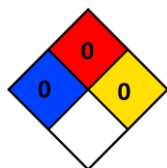
**UNSUITABLE EXTINGUISHING MEDIA:** No information available

**SPECIFIC HAZARDS ARISING FROM THE CHEMICAL:** Thermal decomposition of Tin can lead to release of irritating gases and vapors.

**HAZARDOUS DECOMPOSITION PRODUCTS:** No information available.

#### NFPA HAZARD CLASSIFICATION

HEALTH: 0 FLAMMABILITY: 0 REACTIVITY: 0



#### HMIS HAZARD CLASSIFICATION

HEALTH: 0 FLAMMABILITY: 0 REACTIVITY: 0

HEALTH	0
FIRE	0
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



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**PERSONAL PRECAUTIONS AND PROTECTIVE EQUIPMENT:** Ensure adequate ventilation.

**ENVIRONMENTAL PRECAUTIONS:** Prevent further leakage or spillage if safe to do so.

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

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### SECTION 7: HANDLING AND STORAGE

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**HANDLING:** Avoid contact with skin and eyes Do not breathe dust Do not breathe vapors or spray mist.

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

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### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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#### EXPOSURE GUIDELINES:

**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

**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.

**WORK HYGIENIC PRACTICES:** Handle in accordance with good industrial hygiene and safety practice.

#### EXPOSURE CONTROLS:

ACGIH TLV-TWA:	Tin	2mg/cu ACGIH
		2mg/cu m (inorganic) OSHA
		0/1mg/cu m (organic) OSHA
	Silver	0.1mg/cu ACGIH/OSHA

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

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

PEL – Long term value: 2 mg/m<sup>3</sup>

REL – Long term value: 2 mg/m<sup>3</sup>

TLV – long term value: 2 mg/m<sup>3</sup>

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

PEL - Long term value: 0.01 mg/m<sup>3</sup> metal and soluble compounds (as Ag)

REL - Long term value: 0.01 mg/m<sup>3</sup>

TLV - Long term value: 0.01 mg/m<sup>3</sup> metal: dust and fume



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### NOTES:

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:** (361-961 °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:**

**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.

**INCOMPATIBILITY (MATERIAL TO AVOID):** Acids, Strong oxidizing agents, Strong bases, Halogens, Metals, oxygen.

**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:** None under normal use.

**HAZARDOUS POLYMERIZATION:** Will not occur

### SECTION 11: TOXICOLOGICAL INFORMATION

**Acute Toxicity:** No acute toxicity information is available for Tin; Harmful dust for silver..

**Component Information**

**Toxicologically Synergistic** No information available



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

**Irritation** No information available

**Sensitization** No information available

**Carcinogenicity** No information available

**Mutagenic Effects:** No information available

**Reproductive Effects:** No information available.

**Developmental Effects:** No information available.

**Teratogenicity:** No information available.

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed:** No information available

**Endocrine Disruptor Information** No information available

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

### SECTION 12: ECOLOGICAL INFORMATION

**ECOTOXICITY:** Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

**PERSISTENCE AND DEGRADABILITY:** No information available.

**BIOACCUMULATIVE POTENTIAL:** No information available.

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

### SECTION 13: DISPOSAL CONSIDERATIONS

**WASTE DISPOSAL METHODS:** Dispose of in accordance with local regulations.

### SECTION 14: TRANSPORT INFORMATION

#### 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)



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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.

**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

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#### **PREPARATION INFORMATION**

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

**CREATION DATE:** 01/01/2012  
**REVISION DATE:** 11/25/2019  
**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



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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**