



SAFETY DATA SHEET (SDS)

Lead Solder Alloy Sn42Bi58

Date: 1/1/2020

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Lead Solder Alloy Sn42Bi58

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

Index No:

EC No: 231-141-8

CAS No: 7440-69-9 Bismuth (Bi)

Index number:

EC number: 231-177-4

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



GHS08

SIGNAL WORD: Warning

HAZARD STATEMENT:

H302 Harmful if swallowed.

H320 Causes eye

PRECAUTIONARY STATEMENT:



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P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash face, hands and any exposed skin thoroughly after handling
P281 Use personal protective equipment as required.
P333+313 If skin irritation or rash occurs: Get medical attention.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:

<u>CAS NO.</u>	<u>DESCRIPTION</u>	<u>% WT</u>
7440-31-5	Tin (Sn)	38-46
7440-69-9	Bismuth (Bi)	54-62

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: 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.

SECTION 5: FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA: Carbon dioxide (CO₂), Nitrogen oxides (NO_x), Carbon monoxide (CO), sand, extinguishing powder.

UNSUITABLE EXTINGUISHING MEDIA: No information available

FLASH POINT: No information available

F: No information available

C: No information available

METHOD USED: No information available

EXPLOSION LIMITS

UPPER: No data available.

LOWER: No data available.

SENSITIVITY TO MECHANICAL IMPACT: No information available.

SENSITIVITY TO STATIC DISCHARGE: No information available.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: Keep product and empty container away from heat and sources of ignition.

HAZARDOUS DECOMPOSITION PRODUCTS: Lead and Antimonial fumes at high temperatures.

NFPA HAZARD CLASSIFICATION

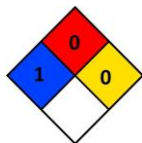
HEALTH: 1 FLAMMABILITY: 0 REACTIVITY: 0



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HMIS HAZARD CLASSIFICATION

HEALTH: 1

FLAMMABILITY: 0

REACTIVITY: 0

HEALTH	1
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

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. Keep under nitrogen.

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.

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.



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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

Bismuth Not Regulated ACGIH/OSHA

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

7440-69-9 Bismuth (Bi)

PEL – Long term value: 15 mg/m³ (total); 5 mg/m³ (resp)

REL – Long term value: 10 mg/m³ (total); 5 mg/m³ (resp)

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

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: 183-238 °C (361-460 °F)

BOILING POINT/RANGE:

FLASH POINT: Not flammable

FREEZING POINT/RANGE:

EVAPORATION RATE:

FLAMMABILITY (SOLID, GAS):

FLAMMABILITY OR EXPLOSIVE LIMITS

UPPER:



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LOWER:

VAPOR PRESSURE: Not applicable

VAPOR DENSITY: Not applicable

RELATIVE DENSITY: at 20 °C (68 °F): 8.4 – 9.3 g/cm³ (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, reducing agents, halogens.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: No decomposition if used according to specifications.

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 No information available

Sensitization 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: Bismuth Causes damage to the following organs: lungs, mucous membranes.

Endocrine Disruptor Information No information available

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

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: No further relevant information available.

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

BIOACCUMULATIVE POTENTIAL: No further relevant information available.

MOBILITY IN SOIL: No further relevant information available.



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SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS: Disposal must be made according to official regulations. If proper disposal methods are not available, return product to supplier for reprocessing.

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)

UN/NA NUMBER: Not Regulated.
UN PROPER SHIPPING NAME: Not Regulated.
TRANSPORT HAZARD CLASS(ES): Not Regulated.
PACKING GROUP: Not Regulated.

SECTION 15: REGULATORY INFORMATION

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.



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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: This product contains a chemical(s) known to the State of California to cause birth defects and/or other reproductive harm.

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)

SECTION 16: OTHER INFORMATION

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 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