Safety Data Sheet (SDS)

Section 1: Product and Company Identification

Product Identifier:	**Copper-Based Alloys (Silicon Bronze, Deoxidized Copper, Aluminum Bronze, Nickel Silver)**
Product Use:	Welding and brazing
Item Code:	SB__, DEOX__, ABA___, NS___
Supplier Name:	Powerweld Inc.
Supplier Address:	2501 Beech Street Valparaiso, IN 46383
Supplier Web Address:	www.powerweldinc.com
Supplier Phone:	219-462-8700 1-800-826-9073
Emergency Phone:	CHEMTREC (24-hour) 1-800-424-9300
Prepared By:	Powerweld Inc.
Preparation Date:	1 January 2026

Section 2: Hazard Identification

Classification:	Not classified
Symbols:	Not applicable
Signal Word:	Not applicable
Hazard Statements:	Not applicable
Precautionary Statements:	Not applicable
Other Hazards:	Arc rays can injure eyes and burn skin. Welding arc and sparks can ignite combustibles and flammable materials. Overexposure to welding fumes and gases can be hazardous.

Section 3: Composition/Information on Hazardous Ingredients

HAZARDOUS INGREDIENTS	CAS NUMBER	ACGIH TLV (mg/m3)	APPROXIMATE CONCENTRATION (%)
Copper (Cu)	7440-50-8	1.0 (dust)	46 - 97
Aluminum (Al)	7429-90-5	10.0	<12
Iron (Fe)	7439-86-6		<6.5
Lead (Pb)	749-92-1	0.15	<5
Manganese (Mn)	7439-96-5	5.0	<14
Nickel (Ni)	7440-02-0	1.0	<32
Silicon (Si)	7440-12-3	10.0	<3.5
Tin(Sn)	7440-31-5	2.0	<5
Zinc (Zn)	7440-66-6	5 (oxide fume)	<45

Section 4: First-aid Measures

Inhalation:	Inhalation may be the most common cause of overexposure due to the welding fumes. Large amounts of welding fumes will cause irritation of the nose, eyes and skin. Move from the area that has any fumes to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and transport to nearest medical facility for additional treatment.
Ingestion:	Not an expected route of exposure. Rinse month completely and drink a cup of water if conscious; obtain medical assistance when needed.
Eye Contact:	If arc flash or burns occur, obtain medical assistance. Large exposure to welding fumes may cause irritation to the eyes. Immediately flush upper and lower eyelids with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Rest eyes for 30 minutes. If redness, burning, blurred vision or swelling persists, visit nearest medical facility for additional treatment.
Skin Contact:	Large exposure to welding fumes may cause irritation to skin. If burns occur, flush with clean cool water for 15 minutes; obtain medical assistance when needed.

NOTE: In all severe cases, contact physician immediately. Local telephone operators can provide number of regional poison control centre.

Section 5: Fire-fighting Measures

Flammable:	Not flammable
Means of Extinction:	Not applicable
Auto-ignition Temperature:	Not applicable
Hazardous Combustion Products:	Not applicable
Explosion Data Sensitivity to Mechanical Impact:	Not applicable
Explosion Data Sensitivity to Static Discharge:	Not applicable
Special Equipment:	See below
Precautions for Fire Fighters:	This product as shipped is non-flammable; however, fine chips and dust may increase the explosion rating under certain heat and other ignition hazards. Hydrogen gas and irritating fumes may form when involved in a fire or if decomposing is caused from water, alcohol or sodium hydroxides. Do not use water with any molten metals and use self-contained safety clothing/equipment in case of fires.

Section 6: Accidental Release Measures

Protective Equipment:	See Section 8
Emergency Procedures:	This product is in rod and wire form and has no hazards as shipped.

Leak or Spill Procedure: If spilled, the product may be picked up (wearing gloves) and placed back into the container. If metals become molten, contain with sand and allow to return back into a solid for recycle as scrap

Section 7: Handling and Storage

Handling Procedures and Equipment: Proper protective gloves can be worn while handling product. During all operations, do not eat or drink while handling and ensure proper ventilation while welding, brazing or processing.

Storage Requirements: Store in a cool, dry and low humid location.

Incompatibilities: None known

Section 8: Exposure Controls/Personal Protection

Exposure Limits:

HAZARDOUS INGREDIENTS	CAS NUMBER	ACGIH TLV (mg/m3)
Copper (Cu)	7440-50-8	1.0 (dust)
Aluminum (Al)	7429-90-5	10.0
Iron (Fe)	7439-86-6	
Lead (Pb)	749-92-1	0.15
Manganese (Mn)	7439-96-5	5.0
Nickel (Ni)	7440-02-0	1.0
Silicon (Si)	7440-12-3	10.0
Tin(Sn)	7440-31-5	2.0
Zinc (Zn)	440-66-6	5 (oxide fume)

Engineering Controls: Ensure proper ventilation and respiratory protection is used when welding, brazing or processing. Respiratory protection is recommended and information may be found regarding the OSHA STANDARDS (29 CRF 1910.134), as well as CSA Standards Z94.4, along with many other safety standards.

Personal Protective Equipment: Use proper welding helmet or safety shield, as well as clothing and gloves, as required for job duties. Do not eat or drink while using these products and wash hands after use.

Section 9: Physical and Chemical Properties

Physical State: Solid

Odour and Appearance: Odourless, light yellow – dark brown rods or wire

Odour Threshold (ppm): Not applicable

pH: Data not available

Melting Point: Data not available

Freezing Point: Data not available

Boiling Point: Data not available

Flashpoint: Data not available

Upper Flammable Limit (% by volume): Data not available

Lower Flammable Limit (% by volume): Data not available

Section 10: Stability and Reactivity

Chemical Stability:	Stable
Possible Hazardous Reactions:	During welding, brazing and processing: fumes, dust and gas decomposition may form.
Conditions to Avoid:	Avoid extreme temperatures.
Materials to Avoid (Incompatibilities):	Ammonia, mercury, concentrated acid
Conditions of Reactivity:	Not available
Hazardous Decomposition By-Products:	Not available
Hazardous Polymerization:	Does not occur

Section 11: Toxicological Information

Skin Contact:	Arc rays can burn skin; skin cancer has been reported.
Skin Absorption:	Not applicable
Eye Contact:	Arc rays can injure eyes.
Inhalation:	Inhalation is the most likely route of exposure; refer to "Effects of Acute Exposure" and "Effects of Chronic Exposure" below.
Ingestion:	Unlikely due to form of product.
Effects of Acute Exposure:	Overexposure or inhalation of large amounts of welding fumes may cause symptoms such as metal fume fever, dizziness, nausea, dryness and irritation of your nose, throat or eyes as well as lung disease.
Effects of Chronic Exposure:	Overexposure or prolonged inhalation of large amounts of welding fumes symptoms may include damage to the central nervous system, respiratory system, skin and could affect organs such as pancreas and liver.
Irritancy of Product:	Not available
Sensitization to Product:	Not available
Carcinogenicity:	OSHA (29 CFR 1910.1200) lists lead and nickel as possible carcinogens, and welding fumes as a possible carcinogen (2B).
Reproductive Effects:	Not available
Respiratory Sensitization:	Not available
Toxicological Data:	Acute oral (Rat) – *Manganese* (LD50): 9000 mg/kg; *Silicon* (LD50): 3160 mg/kg

Section 12: Ecological Information

Aquatic and Terrestrial Toxicity:	Not available
Persistence and Degradability:	Not available
Bioaccumulative Potential:	Not available
Soil Mobility:	Not available

Section 13: Disposal Considerations

NOTE: Always dispose of waste in accordance with local, provincial and federal regulations.

Safe Handling:	Gloves can be worn while handling discarded or unwanted product.
Methods of Disposal:	Recycle when possible. Do not allow to enter drains, sewers or watercourses. Discard any unwanted product, residues, containers, or liners in a suitable disposal container in an environmentally acceptable manner, as required by relevant legislation.

Section 14: Transportation Information

This material is not considered as a dangerous good per transportation regulations.

Section 15: Regulatory Information

California Proposition 65:	This product contains a chemical known to the state of California to cause cancer, or birth defects or reproductive harm.
OSHA Carcinogenicity Statement:	Lead and nickel compounds are required by OSHA to be considered carcinogenic.

Section 16: Other Information

Preparation Date:	4 March 2016
Date of Last Revision:	1 January 2026

This SDS format is in accordance with GHS. Powerweld Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Product use and conditions of use are beyond the control of Powerweld. Warranty of materials is limited to test results of product performance as detailed in certificates of compliance. Interpretation of test results is the responsibility of end-user. No other warranties, expressed or implied, are made.