



SAFETY DATA SHEET

Section 1: Product and Company Identification

Product Identifier: **Low Fuming Bronze – Bare and Flux Coated**
Product Use: For welding or brazing metals
Item Code: BB_, FC_
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 (800) 424-9300
Prepared By: PowerWeld Inc.
Preparation Date: 20 September 2016

Section 2: Hazard Identification

Classification: This product is not considered hazardous according to the Globally Harmonized System (GHS).
Label Elements: Not applicable
Other Hazards: Not applicable

Section 3: Composition/Information on Hazardous Ingredients

HAZARDOUS INGREDIENTS	CAS NUMBER	APPROXIMATE CONCENTRATION (%)
Copper	7440-50-8B	56 - 60
Zinc	1314-13-2	Balance
Tin	7440-31-5	0.8 - 1.1
Manganese	7439-96-5	0.01 - 0.50
Iron	1309-37-1	0.25 - 1.2
Silicon	7440-21-3	0.04 - 0.15
<u>Flux Coating</u>		
Boric Acid	10043-35-3	>50
Borates	1330-43-4	>25
Toluene	108-88-3	>10
Remaining Binder	Non-hazardous	<10

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 mouth 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.

Symptoms:

Treat symptomatically. Brazing hazards are complex and may include physical and health hazards such as but not limited to infrared radiation from flame or hot metal, physical strains, thermal burns due to hot metal or spatter and potential health effects of overexposure to brazing fume or dust.

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:

Use appropriate extinguishing agent for surrounding fires.

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:

If airborne dust and/or fume is present, use adequate engineering controls and, if needed, personal protection to prevent overexposure. 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. Avoid generating additional dust. Prevent product from entering drains, sewers and water sources.

Section 7: Handling and Storage

Handling Procedures and Equipment:

Prevent the formation of dust. Ensure good ventilation/exhaustion at the workplace when welding/brazing. Any deposit of dust which cannot be avoided must be regularly removed.

Storage Requirements:

Store in closed original container in a dry place. Store away from incompatible materials.

Incompatibilities:

Strong acids and alkali; strong oxidizing agents.

Section 8: Exposure Controls/Personal Protection

Exposure Limits:

HAZARDOUS INGREDIENTS	CAS NUMBER	ACGIH TLV (mg/m ³)
Copper	7440-50-8B	0.2
Zinc	1314-13-2	5.0
Tin	7440-31-5	5.0
Manganese	7439-96-5	1.0(fume)
Iron	1309-37-1	5.0
Silicon	7440-21-3	10.0
<i>Flux Coating</i>		
Boric Acid	10043-35-3	10.0
Borates	1330-43-4	1.0
Toluene	108-88-3	375
Remaining Binder	Non-hazardous	-

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 CFR 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

<i>Physical State:</i>	Solid material
<i>Odour and Appearance:</i>	Odourless rod (colour varies by product specification)
<i>Odour Threshold (ppm):</i>	Not applicable
<i>pH:</i>	Not applicable
<i>Melting Point:</i>	915°C / 1679°F
<i>Freezing Point:</i>	Not applicable
<i>Boiling Point:</i>	Not determined
<i>Flashpoint:</i>	Not applicable
<i>Upper Flammable Limit (% by volume):</i>	Not determined
<i>Lower Flammable Limit (% by volume):</i>	Not determined

Section 10: Stability and Reactivity

<i>Chemical Stability:</i>	Stable under normal processing.
<i>Possible Hazardous Reactions:</i>	During welding, brazing and processing: fumes, dust and gas decomposition may form. Alternatively, this product is non-reactive under normal conditions of use, storage and transport.
<i>Conditions to Avoid:</i>	Avoid heat or contamination.
<i>Materials to Avoid (Incompatibilities):</i>	Strong acids and alkali; strong oxidizing agents.
<i>Conditions of Reactivity:</i>	See above
<i>Hazardous Decomposition By-Products:</i>	Brazing fumes and gases cannot be classified simply. The composition and quantity of the fumes and gases are dependent upon the base metal, the flux and filler metal being used. Coatings or residue on the base metal such as cleaning or degreasing agents, paint, galvanizing or plating will produce fumes as well. Other conditions which influence the composition and quality of the fumes and gases to which workers may be exposed are: the

number of operators relative to the volume of the work area, the quality and amount of ventilation, the position of the user's head in respect to the fume plume, as well as the presence of contaminants in the atmosphere such as halogenated hydrocarbon vapours from cleaning and degreasing activities. When brazing, the composition of the fumes and gases are usually different from the composition of the ingredients mentioned in Section 3. Fume ingredients of normal operation include those originating from volatilization, reaction, or oxidation of the materials noted in the above paragraph.

Hazardous Polymerization:

Not applicable

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. Other symptoms include siderosis (iron deposits in lung), bronchitis and other pulmonary effects.

Irritancy of Product:

Not applicable

Sensitization to Product:

Not applicable

Carcinogenicity:

Not applicable

Reproductive Effects:

Not applicable

Respiratory Sensitization:

Not available

Toxicological Data:

Not available

Section 12: Ecological Information

Aquatic and Terrestrial Toxicity:

Inorganic product; is not eliminable from water by means of biological cleaning processes.

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 current transportation regulations.

Section 15: Regulatory Information

<i>California Proposition 65:</i>	This product <i>does not</i> contain any chemicals known to the state of California to cause cancer, or birth defects or reproductive harm.
<i>U.S. State Right to Know:</i>	<u>Copper</u> New Jersey, Massachusetts, Pennsylvania, Rhode Island
	<u>Zinc Metal</u> New Jersey, Massachusetts, Pennsylvania, Rhode Island
	<u>Tin</u> New Jersey, Massachusetts, Pennsylvania, Rhode Island

Section 16: Other Information

<i>Preparation Date:</i>	20 September 2016
<i>Date of Last Revision:</i>	20 September 2016

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.