

Safety Data Sheet

Section 1: Identification

- **Product Name:** Phosphorus Bronze C
- **Manufacturer:** Inweld Corporation
- **Address:** 3962 Portland St, Coplay, PA 18037, UNITED STATES
- **Telephone Number:** (800) 346-5368
- **Emergency Phone Number:** (800) 424-9300 (Chemtrec)
- **Recommended Use:** Used primarily for manufacturing components requiring strength and resistance to wear and corrosion. Commonly used in electrical and mechanical applications.
- **Restrictions on Use:** Not intended for direct food or water contact.

Section 2: Hazard(s) Identification

- **GHS Classification:**
 - Acute Toxicity (Inhalation) – Category 4
 - Eye Irritation – Category 2A
 - Skin Irritation – Category 2
 - Sensitization (Skin) – Category 1
 - Carcinogenicity – Category 1A
- **Label Elements:**
 - **Pictograms:**

 - **Signal Word:** Danger
 - **Hazard Statements:**

- Harmful if inhaled.
- Causes skin irritation.
- Causes serious eye irritation.
- May cause an allergic skin reaction.
- May cause cancer (inhalation).
- **Precautionary Statements:**
 - **Prevention:**
 - Do not breathe dust/fume/gas/mist/vapors/spray.
 - Wash thoroughly after handling.
 - Wear protective gloves/protective clothing/eye protection/face protection.
 - Use only outdoors or in a well-ventilated area.
 - **Response:**
 - If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
 - If skin irritation or rash occurs: Get medical advice/attention.
 - **Storage:**
 - Store in a well-ventilated place. Keep container tightly closed.
 - **Disposal:**
 - Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3: Composition/Information on Ingredients

Chemical Name	CAS Number	Concentration
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Copper	7440-50-8	85-95%
Tin	7440-31-5	3-5%
Phosphorus	7723-14-0	0.01-0.5%
Other Elements	-	<1%

Section 4: First-Aid Measures

- **Inhalation:**
 - Move to fresh air immediately. If breathing is difficult, administer oxygen. Seek medical attention if symptoms persist.
- **Skin Contact:**
 - Wash affected area with soap and water. If irritation persists, seek medical attention.
- **Eye Contact:**
 - Rinse immediately with plenty of water for at least 15 minutes. Seek medical attention if irritation persists.
- **Ingestion:**
 - Rinse mouth with water. Seek medical attention if discomfort or symptoms occur.

Section 5: Fire-Fighting Measures

- **Suitable Extinguishing Media:**
 - Dry chemical, CO₂, foam, or water spray. Use appropriate media depending on surrounding materials.
- **Unsuitable Extinguishing Media:**
 - Water jets.

- **Special Hazards Arising from the Substance or Mixture:**
 - May emit toxic fumes, including phosphorus oxides, when heated to decomposition.
- **Protective Equipment:**
 - Firefighters should wear full protective gear and a self-contained breathing apparatus (SCBA).

Section 6: Accidental Release Measures

- **Personal Precautions:**
 - Avoid inhaling dust/fumes. Use appropriate personal protective equipment (PPE).
- **Environmental Precautions:**
 - Do not allow product to enter drains or water sources.
- **Methods for Containment and Clean-up:**
 - Sweep up material and place in a suitable container for disposal. Avoid generating dust.

Section 7: Handling and Storage

- **Handling:**
 - Avoid inhalation of dust or fumes. Avoid skin and eye contact.
 - Use proper ventilation, local exhaust systems, or respirators if necessary.
- **Storage:**
 - Store in a dry, well-ventilated area. Keep containers tightly closed.

Section 8: Exposure Controls/Personal Protection

- **Occupational Exposure Limits:**
 - **Copper:** 0.1 mg/m³ (OSHA TWA)

- **Tin:** 2 mg/m³ (OSHA TWA)
- **Engineering Controls:**
 - Use local exhaust ventilation to minimize exposure to dust or fumes.
- **Personal Protective Equipment (PPE):**
 - **Respiratory Protection:** Use a dust mask or respirator when handling in dusty environments.
 - **Eye Protection:** Wear safety glasses or goggles.
 - **Hand Protection:** Wear gloves to prevent skin contact.
 - **Skin Protection:** Use protective clothing as necessary.

Section 9: Physical and Chemical Properties

- **Appearance:** Metallic, yellow to brownish-gold color.
- **Odor:** Odorless
- **Melting Point:** 950–1000°C
- **Boiling Point:** Not applicable
- **Density:** ~8.9 g/cm³
- **Solubility in Water:** Insoluble
- **Flash Point:** Not applicable (solid material)
- **Vapor Pressure:** Negligible

Section 10: Stability and Reactivity

- **Reactivity:** Stable under normal conditions.
- **Chemical Stability:** Stable under recommended storage and handling conditions.
- **Hazardous Reactions:** None under normal use.
- **Conditions to Avoid:** High temperatures, direct flame.
- **Incompatible Materials:** Strong oxidizers, acids.

Section 11: Toxicological Information

- **Acute Toxicity:**
 - **Copper:** Harmful if inhaled or ingested. Inhalation of fumes can cause metal fume fever.
 - **Tin:** May cause gastrointestinal discomfort if ingested.
- **Chronic Toxicity:**
 - Prolonged inhalation of dust or fumes may cause chronic respiratory conditions.
 - **Carcinogenicity:** Phosphorus bronze may contain traces of substances that are known or suspected to be carcinogenic.
- **Skin and Eye Irritation:**
 - Causes skin irritation and may cause eye irritation.
- **Sensitization:**
 - Can cause skin sensitization in susceptible individuals.

Section 12: Ecological Information

- **Ecotoxicity:** No data available. Avoid release to the environment.
- **Persistence and Degradability:** Not readily biodegradable.
- **Bioaccumulative Potential:** No significant bioaccumulation expected.
- **Mobility in Soil:** Not expected to migrate through soil.

Section 13: Disposal Considerations

- **Disposal Method:** Dispose of in accordance with federal, state, and local regulations. Do not dispose of in drains, sewers, or water sources.

Section 14: Transport Information

- **UN Number:** Not classified as hazardous for transport.
- **Proper Shipping Name:** Not applicable.
- **Transport Hazard Class:** Not regulated.
- **Packing Group:** Not applicable.

Section 15: Regulatory Information

- **OSHA Hazard Communication Standard:** This product is classified under the OSHA HCS.
- **TSCA:** All components of this product are listed on the TSCA inventory.
- **SARA 313:** This product contains copper and tin, which may require reporting under SARA Section 313.

Section 16: Other Information

- **Revision Date:** June 2, 2025
- **Disclaimer:** The information in this SDS is believed to be accurate and reliable as of the date of preparation. However, no warranty is expressed or implied regarding the accuracy of this information or the results to be obtained from the use thereof.