

Safety Data Sheet

Section 1: Identification

Product Name: Aluminum Bronze-46

Manufacturer Name: Inweld Corporation

Manufacturer Address: 3962 Portland St, Coplay, PA 18037, UNITED STATES

Telephone Number: (800) 346-5368

Emergency Phone Number: (800) 424-9300

Product Use: Alloy for industrial and manufacturing applications

Date of Preparation: June 2, 2025

Section 2: Hazard(s) Identification

GHS Classification:

- **Health Hazards:**
 - Acute Toxicity (Inhalation) - Category 4
 - Carcinogenicity - Category 1B
- **Physical Hazards:**
 - Flammable Solid - Category 1

Signal Word: Danger

Hazard Statements:

- H332: Harmful if inhaled.
- H350: May cause cancer.
- H228: Flammable solid.

Precautionary Statements:

- P201: Obtain special instructions before use.

- P210: Keep away from heat, sparks, open flames, and hot surfaces. No smoking.
- P261: Avoid breathing dust, fume, gas, mist, vapors, or spray.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P308+P313: IF exposed or concerned: Get medical advice/attention.
- P370+P378: In case of fire: Use dry chemical, foam, or carbon dioxide for extinction.

GHS Hazard Pictograms:



Section 3: Composition/Information on Ingredients

Substance:

- **Common Name:** Aluminum Bronze-46
- **Chemical Family:** Copper alloy
- **CAS Number:** Not available (Alloy composition, proprietary)
- **Component Information:**
 - Copper (Cu): 85-90%
 - Aluminum (Al): 6-9%
 - Iron (Fe): 1-3%
 - Nickel (Ni): 2-5%
 - Small trace of other metals such as manganese (Mn), silicon (Si), and tin (Sn).

Section 4: First-Aid Measures

Inhalation:

- If inhaled, remove the person to fresh air immediately. Keep comfortable for breathing. Seek medical attention if symptoms persist.

Skin Contact:

- Wash with soap and water. If irritation persists, seek medical advice.

Eye Contact:

- Immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention.

Ingestion:

- Rinse mouth with water. Do not induce vomiting. Seek medical attention immediately.

Section 5: Fire-Fighting Measures

Flammability:

- Aluminum bronze is a flammable solid and may ignite if exposed to heat or flame.

Extinguishing Media:

- Dry chemical, foam, or carbon dioxide (CO₂).

Special Fire-Fighting Procedures:

- Wear self-contained breathing apparatus (SCBA) and full protective gear.
- Water may be ineffective, and flooding should be avoided to prevent the spread of the fire.

Unusual Fire or Explosion Hazards:

- Aluminum bronze dust or powder may present a fire or explosion hazard when dispersed in air.

Section 6: Accidental Release Measures

Personal Precautions:

- Wear appropriate personal protective equipment (PPE) including gloves, safety glasses, and respirators as necessary. Avoid dust inhalation and contact with skin.

Environmental Precautions:

- Prevent material from entering drains or watercourses.

Methods for Containment and Clean-Up:

- Sweep up material and place it in a suitable container for disposal.
- Avoid generating dust during the clean-up process.

Section 7: Handling and Storage

Handling:

- Handle in a well-ventilated area to minimize dust exposure. Avoid creating airborne dust during cutting or grinding.

Storage:

- Store in a cool, dry, and well-ventilated area away from heat, flames, and incompatible materials.

Section 8: Exposure Controls/Personal Protection

Exposure Limits:

- No established OSHA PELs for the individual components of Aluminum Bronze-46, but general dust exposure limits should be followed.

Engineering Controls:

- Provide adequate ventilation or dust extraction systems to reduce exposure.

Personal Protective Equipment (PPE):

- **Respiratory Protection:** If airborne dust or fume levels exceed recommended exposure limits, use a respirator with a dust filter.
- **Hand Protection:** Wear protective gloves to avoid skin contact.
- **Eye Protection:** Wear safety glasses or goggles to prevent eye contact.

- **Skin Protection:** Wear suitable protective clothing.

Section 9: Physical and Chemical Properties

- **Appearance:** Metal alloy, typically a solid bar or rod
- **Color:** Gold to bronze
- **Odor:** Odorless
- **Melting Point:** 900-1080°C (depending on alloy composition)
- **Density:** 7.5-8.5 g/cm³
- **Solubility:** Insoluble in water
- **Boiling Point:** Not applicable (solid at room temperature)

Section 10: Stability and Reactivity

Stability:

- Stable under normal conditions of use and storage.

Conditions to Avoid:

- Exposure to high heat and flames, which could lead to ignition or decomposition.

Incompatible Materials:

- Strong acids, strong bases, and oxidizing agents.

Hazardous Decomposition Products:

- Copper fumes, aluminum oxide, and other metal oxides.

Section 11: Toxicological Information

- **Acute Toxicity:**
 - Harmful if inhaled (acute inhalation toxicity category 4).
 - May cause respiratory irritation, lung damage, and coughing.
- **Carcinogenicity:**

- May cause cancer (Category 1B), based on potential for chronic inhalation of metal fumes over prolonged exposure.
- **Skin and Eye Irritation:**
 - Non-irritating under normal conditions of use. However, dust can cause mechanical irritation to the skin and eyes.

Section 12: Ecological Information

- **Ecotoxicity:**
 - Not expected to pose significant environmental hazards when used properly.
- **Persistence and Degradability:**
 - Alloy is persistent in the environment and will not degrade.
- **Bioaccumulative Potential:**
 - Not expected to bioaccumulate.

Section 13: Disposal Considerations

- **Waste Disposal Method:**
 - Dispose of in accordance with local, state, and federal regulations.
 - Recycling of scrap material is recommended.

Section 14: Transport Information

- **UN Number:** Not classified as hazardous for transportation.
- **Proper Shipping Name:** Aluminum bronze alloy
- **Hazard Class:** None
- **Packing Group:** Not applicable
- **Environmental Hazards:** None known

Section 15: Regulatory Information

- **OSHA Hazard Communication Standard (29 CFR 1910.1200):** This material is classified as hazardous.
- **TSCA Inventory Status:** All components of this product are listed on the TSCA Inventory.
- **California Proposition 65:** This product contains chemicals known to the state of California to cause cancer or reproductive harm (refer to Section 11 for further information).

Section 16: Other Information

- **Disclaimer:**
 - The information provided in this Safety Data Sheet is based on the best knowledge available to Inweld Corporation at the time of preparation. It is not intended to be a complete representation of all potential hazards or safety precautions. Users should assess all hazards associated with the product and take appropriate precautions as necessary.