C60800 Aluminum Bronze Tube - Product Technical Handbook

GNEE's main copper products include copper tubes, copper rods, copper plates, copper wires, copper strips, etc.

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C60800 Aluminum Bronze Tube

C60800 aluminum bronze is a common copper alloy primarily composed of copper and aluminum. Its excellent corrosion resistance and mechanical properties make it widely used in the manufacture of seawater cooling equipment, chemical industry equipment, and shipbuilding. C60800 aluminum bronze has excellent weldability and machinability, making it suitable for various processing and forming processes. Furthermore, it possesses high strength and hardness, and can maintain stability in high-temperature and high-pressure environments. Other advantages of C60800 aluminum bronze include its excellent thermal and electrical conductivity, making it an ideal material for the electronics and electrical industry. Overall, C60800 aluminum bronze is a versatile copper alloy with broad application prospects.

Key Advantages & Properties

Excellent Wear Resistance: Outstanding resistance to wear, galling, and impingement erosion.

Superior Corrosion Resistance: Highly resistant to corrosion in seawater, acidic environments, and various chemical solutions.

High Strength & Hardness: Offers higher mechanical properties compared to many other copper-based alloys, maintained at elevated temperatures.

Good Anti-Sparking Properties: Safe for use in explosive atmospheres.

Good Machinability: Can be readily machined into complex components.

Good Weldability: Can be welded using common techniques such as GTAW (TIG).

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Specifications & Standards

Our C60800 tubes are manufactured to meet or exceed the requirements of the following international standards:

ASTM B150 / B151: Standard Specification for Aluminum Bronze Rod, Bar, and Shapes.

UNS No.: C60800

QQ-C-465: Federal Specification for Copper Alloy Sand Castings.

Other Standards: DIN 17670, EN 1982 (Can be supplied upon request).

Common Tempers:

Extruded (H110)

Drawn (H80)

Annealed (O60)

Chemical Composition (ASTM B150 Requirements)

Element	Composition(%)
Copper (Cu)	Remainder
Aluminum (Al)	4.0 - 6.5
Iron (Fe)	0.50 max
Tin (Sn)	0.20 max
Zinc (Zn)	0.20 max
Manganese (Mn)	0.30 max
Silicon (Si)	0.10 max
Lead (Pb)	0.05 max
Other (Total)	0.50 max

Physical Properties (Typical Values)

Property	Value	Unit
Density	7.89	g/cm^3
Melting Point (Liquidus)	~1040	° C
Thermal Conductivity	58.6	W/m • K
Electrical Conductivity	17	% IACS
Modulus of Elasticity	121	GPa
Coefficient of Thermal Expansion (20-300° C)	17.8	10^{-6}/° C

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Mechanical Properties

Temper	TensileStrength(min)	YieldStrength (0.2%Offset)	Elongation (in2")	Hardness
O60 (Annealed)	380 MPa (55 ksi)	140 MPa (20 ksi)	40%	Rb 55
H110 (Extruded)	520 MPa (75 ksi)	205 MPa (30 ksi)	25%	Rb 75
H80 (Drawn)	585 MPa (85 ksi)	415 MPa (60 ksi)	12%	Rb 85

Product Specifications & Tolerances

Standard Product Range

Outside Diameter (OD): 10 mm to 250 mm

Wall Thickness (WT): 2.0 mm to 25 mm

Length: Standard straight lengths up to 6 meters. Custom lengths available.

Form: Tubes, Plates, Rods, Wires,Straight lengths, coils (upon request).

Dimensional Tolerances

Tolerances conform to ASTM B150 standards for seamless extruded and drawn tubes. Please contact our sales team for detailed tolerance tables.

Applications

C60800 tubing is specified across a wide range of industries for critical components.

Marine & Offshore: Pump shafts, valve stems, propeller shafts, bushings, fasteners, seawater piping systems.

Oil & Gas: Valve and pump components for corrosive service, fittings.

Chemical Processing: Components exposed to acidic and corrosive chemicals, heat exchanger tubesheets.

Power Generation: Bearings, gears, and wear plates.

Industrial Machinery: High-strength structural components, nuts, bolts, and hydraulic press parts.

Quality Assurance & Certifications

Our quality assurance system ensures full traceability and compliance.

Mill Test Certificate: Supplied with each shipment conforming to EN 10204 3.1 or 3.2.

Chemical Analysis: Performed by optical emission spectroscopy (OAS).

Non-Destructive Testing: Eddy Current or Ultrasonic Testing available upon request.

Dimensional Inspection: 100% verified.

Certifications: ISO 9001:2015.

About Us

Plant And Equipment

We rely on a full-process production line of melting, extrusion, drawing, heat treatment and finishing. Our core equipment includes medium-frequency induction furnaces, extruders, cold drawing machines and annealing furnaces, and are equipped with intelligent detection systems to ensure that the copper we produce is of first-class quality and stable performance.



Packaging And Shipping

To ensure our products arrive in perfect condition, we use robust packaging:

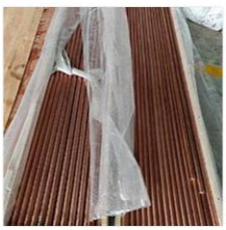
Protective End Caps: Prevent damage to tube ends.

Waterproof Wrapping: Protects against moisture and corrosion during transit.

Secured Bundling: Tubes are bundled and strapped onto wooden crates or pallets.

Clear Labeling: Each bundle is clearly labeled with material grade, heat number, and dimensions.







Founded in 2008, GNEE has many years of experience in copper product export. Headquartered in Henan Province, China, adjacent to the Beijing-Hong Kong-Macao Expressway, the company has over 200 dedicated employees, registered capital of RMB 10 million, and covers an area of over 350,000 square meters. GNEE is SGS-certified.

We provide high-quality copper products, excellent service, and highly competitive pricing. We specialize in the production and manufacturing of copper tubes, rods, sheets, coils, and wire.

Our products are exported to over 160 countries worldwide and are widely used in key sectors such as large-scale pipeline construction, petrochemicals, shipbuilding, the automotive industry, and large power plants.

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