

Key Features

- Excellent electrical conductivity
- Good conductivity
- Good corrosion resistance
- High ductility
- POOR machinability
- Excellent hot and cold forming characteristics

Common Applications

- Plumbing fittings
- Electrical components
- Wave guides and Busbars
- Heat exchanger components
- Blade and ring terminals, cables
- Power transmission components
- Resistance welding electrodes
- Fuses terminals

Material Description

Copper C110, also known as electrolytic tough pitch (ETP) copper or tough pitch copper, is a commercially pure copper alloy. It is characterized by its excellent electrical conductivity, thermal conductivity, and corrosion resistance. Copper C110 is widely used in electrical and electronic applications where high conductivity is essential, such as electrical wiring, busbars, conductive components, and RF antennas. Its high ductility and malleability make it suitable for forming processes such as bending, drawing, and stamping, allowing for the production of intricate shapes and designs. Additionally, this material is often chosen for its aesthetic appeal, as it develops a distinctive reddish-brown patina over time, making it suitable for decorative applications such as architectural elements and artistic sculptures.

Chemical Composition (%)

	Cu	O								
Min.	99.90									
Max.		0.050								

Mechanical Properties

Ultimate Tensile Strength	43,000 - 52,000 PSI
Tensile Yield Strength	41,000 - 50,000 PSI
Hardness	Rockwell 30T 54 - 62
Elongation at Break	3 - 16%

Physical Properties

Density	0.322 lb/in ³ (8.91 g/cm ³)
Thermal Conductivity	390.8W/m.K
Modulus of elasticity	17,000 KSI (117 GPa)
Melting Point	1,981°F (1,083 °C)

Technical Assistance

Our knowledgeable staff, supported by our in-house team of expert metallurgists and engineers, is ready to assist you with any technical inquiries.

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InstaVoxel's quality control system is ISO-9001 certified, and all our partners hold relevant certifications.



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