

Key Features

- Good solder-ability and corrosion resistance
- Excellent electrical conductivity

Common Applications

- Bus Conductors
- Busbars
- Coaxial Cables
- Electrical Conductors
- Klystrons
- Lead In Wire

Material Description

Copper C102, also known as oxygen-free copper or electrolytic tough pitch (ETP) copper, is a high-conductivity copper alloy. It is distinguished by its excellent electrical and thermal conductivity, as well as its exceptional ductility and malleability. Copper C102 is commonly used in electrical and electronic applications where high conductivity is crucial, such as power transmission cables, electrical busbars, motor windings, and electrical contacts. Its purity and homogeneous microstructure make it suitable for applications requiring high reliability and minimal electrical losses. Additionally, Copper C102 can be easily fabricated using common manufacturing processes such as machining, forming, welding, and brazing, making it a preferred material in a wide range of industries.

Chemical Composition (%)

	Cu	O								
Min.	99.94									
Max.		0.0010								

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	0.323 lb/in ³ (8.94 g/cm ³)
Thermal Conductivity	390.8W/m.K
Modulus of elasticity	17,000 KSI (117 GPa)
Melting Point	1,981°F (1,080 °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.

InstaVoxel™ - On-Demand Manufacturing Expert

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



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