

Free Machining Oxygen Free Copper

Typical Applications

- Complex and intricate electrical components
- Electrical switches
- Circuit breaker terminals
- Transformer terminals
- Connector pins
- High current carrying components
- Clamps
- Bolts, nuts & studs

Product Description

C109 is a free machining oxygen free copper. The introduction of Tellurium content raises the machinability of the alloy considerably (to 90%) – this increase in machinability does not impact on conductivity or ductility performance. C109 is not susceptible to hydrogen embrittlement and has good hot and cold workability.

Chemical Composition (weight %)

Weight (%)	Cu	Te	P	Imps
Min	Bal	0.40	0.003	
Max	Bal	0.70	0.012	0.10

Key features:

- Exceptional machining qualities
- Not susceptible to hydrogen embrittlement
- Excellent electrical & thermal conductivity
- Good hot & cold workability

Related material specifications

- BS2874 C109 CuTe
- BS12164 CW118C
- CuTe
- C14500
- DIN 2.1546

Availability

Bar

Joining Methods

Soldering	Excellent
Brazing	Good
Oxy-acetylene welding	Not Recommended
Gas-shielded arc welding	Fair
Resistance welding: Spot & Seam	Not recommended
Butt	Fair

Physical Properties

Density	8.9 g/cm ³
Melting Point	1081 °C
Modulus of Elasticity	12500 Kg/mm ²
Electrical Resistivity	0.0187 microhm m
Thermal Conductivity	370 W/m ² K
Thermal Expansion	17 x10 ⁻⁶ /K

Technical Assistance

Our knowledgeable staff backed up by our resident team of qualified metallurgists and engineers, will be pleased to assist further on any technical topic.

UK Service Centres:

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