

# C110

## Technical Datasheet



Service. Quality. Value.

### Free Machining Oxygen Free Copper

#### Typical Applications

- Circuit breakers
- Electrical instruments
- Vacuum capacitors
- Magnetrons
- Electrical components at cryogenic temperatures
- Anodes
- Semi-conductors
- Transformers

#### Product Description

As one of the purest copper on the market, C110 copper also has the highest thermal and electrical conductivity values. Oxygen content is restricted to maximise hydrogen embrittlement resistance. The metal has excellent joining and formability qualities, especially cold formability which is excellent.

#### Chemical Composition (weight %)

	Cu	P	S	Pb	Others
Min	99.99				
Max		0.0003	0.002	0.001	0.005

#### Key features:

- Very high purity
- Free from hydrogen embrittlement
- Excellent joining qualities
- Excellent formability
- Highest conductivity values

#### Related material specifications

- C10100 OFE
- BS1433 C110
- BS3839
- BS13604 CW009A
- Cu-OFE
- Cu-C2

#### Availability

Bar

#### Joining Methods

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

#### Physical Properties

Density	8.94 g/cm <sup>3</sup>
Melting Point	1083 °C
Modulus of Elasticity	118000 Kg/mm <sup>2</sup>
Electrical Resistivity	0.017 microhm m
Thermal Conductivity	399 W/m <sup>2</sup> K
Thermal Expansion	17.3 x10 <sup>-6</sup> /K

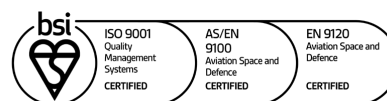
#### Technical Assistance

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:

Smiths Belfast	02895 908 897	Smiths Leeds	0113 307 5167
Smiths Biggleswade	01767 604 704	Smiths London	020 7241 2430
Smiths Birmingham	0121 728 4940	Smiths Manchester	0161 794 8650
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Smiths Gateshead	0191 469 5428	Smiths Redruth	01209 315 512
Smiths Horsham	01403 261 981	Smiths Verwood	01202 824 347

#### Quality & Testing:



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