

C101 Copper (CW004A)

Smiths High Performance



Revision: SHP/english/datasheets/c101/12.02.2025

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For electrical components

C101 copper (CW004A) is a highly versatile engineering material we supply as HDHC (hard drawn, high conductivity).

The material finds typical use in all conductors and electrical components and benefits from high-impact strength, good ductility and superior corrosion resistance.

With a content of 99.9%, C101 is almost pure and forms the basis of many brass and bronze alloys. The material also provides excellent soldering capabilities.

Applications:

- Motor components
- General electronics
- Heatsinks
- Connectors, transformers

Chemical Composition (nominal wt. %)

	Cu	Bi	O	Pb	Others
Min.	Bal				
Max.	Bal	0.0005	0.040	0.005	0.03

* Properties as per BS EN 13601

Mechanical Properties

Tensile properties as per R250 (10 - 30mm)

Tensile Strength (MPa)	250 min
Proof Stress 0.2% (MPa)	180 min
Elongation A5 (%)	15 min

Hardness as per H065

Brinell (HBW)	65 - 90
Vickers (HV)	70 - 95

* Properties as per BS EN 13601



Physical Properties

Density	8.92 g/cm ³
Melting Point	1083° C
Modulus of Elasticity	117 GPa
Electrical Resistivity	0.0171x10 ⁻⁶ Ω.m
Thermal Conductivity	391.1 W/m.K
Thermal Expansion	16.9 x10 ⁻⁶ /K



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