

Cupronic

Cupronic is a copper based resistance alloy with enhanced anti-corrosion properties. It has very low resistivity and is suitable for use in lower temperature applications. It is available in solid, stranded or bunched constructions down to a wire size of 0.08mm. Cupronic is particularly useful in low temperature heating applications such as underfloor heating and blanket wires.

Cupronic should not be confused with the Thermocouple Compensating alloy Cupronic 12 which has a different chemical composition and resistivity.

Physical and Mechanical Properties

	Units	
Nominal composition	%	Cu 99 Ni 1
Density at 20°C	g/cm ³	8.9
Resistivity at 20°C	μΩcm	2.5
Temperature Coefficient of Resistance, 20 – 100°C	1/K	0.003
Coefficient of thermal expansion, 20 – 100°C	1/K	17 x 10 ⁻⁶
Thermal conductivity at 20°C	W/mK	200
Specific Heat Capacity at 20°C	kJ/kgK	0.38
Melting point (approx.)	°C	1080
Tensile strength R _m (0.5 mm wire)	N/mm ²	220

The figures given in this table represent nominal or typical values.

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