

Material Specification

CuCrZr Copper Chromium Zirconium

Beta Stage



Application: CuCrZr (C18150, CW106C) is a Copper alloy used in many applications for high thermal and electrical conductivity. Because of the higher strength and creep resistance, CuCrZr applications are usually for more harsh environments where Pure Copper would not be used.

- Typical applications:**
- Resistance welding tips
 - Tong arms for robots
 - Press parts
 - Bus bars
 - Rocket nozzles
 - Heat exchangers
 - Induction coils

Note: It is advised that the applications are discussed with the sales team first to avoid any over-processing which could add superfluous costs.

Physical and Chemical Properties:			
Material composition	Cr	0.5-1.2 wt%	Si 0.0-0.1 wt%
	Cu	Balance wt%	Zr 0.03-0.3 wt%
	Fe	0.0-0.08 wt%	Others 0.2 wt%
Mechanical Properties:			
		After post-processing	
Tensile Strength	- horizontal direction (XY) - vertical direction (Z)	min. 300MPa	
Yield Strength (Rp 0.2%)	- horizontal direction (XY) - vertical direction (Z)	min. 200MPa	
Elongation at break	- horizontal direction (XY) - vertical direction (Z)	15-20%	
Modulus of elasticity	- horizontal direction (XY) - vertical direction (Z)	110 GPa	
Thermal Properties:			
Electrical conductivity	75-90% IACS		
Thermal conductivity	250-350 W/m/K		

For further technical information or to obtain a quotation for your parts, please contact us on +44 (0)1635 580284 or email your 3D CAD data to enquiries@3trpd.co.uk

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MD_CuCrZr_01 Rev 2