

CTE

Material designation		Chemical composition*			
CuTeP		Elements	% mean	Impurities	% max.
		Te	0.55		
		P	0.008		
		Cu	Balance	Other	0.1
EN12164	CW118C	* Reference values in % by weight			
BS 2874	C109				
DIN 17666	CuTeP - 2.1546				
ASTM B301	C14500				

Properties and typical applications

This alloy combines good machinability, easy forming, good corrosion resistance and high electrical and thermal conductivity. Ideal choice for electrical connectors, plasma cutting electrodes and nozzles, laser nozzles, relay parts, bolts...

Physical properties at 20°C		Heat treatment	
Density (g/cm ³)	8.9	Melting range (°C)	1050-1080
Young modulus (GPa)	120	Hot working (°C)	720-900
Thermal expansion coefficient (20-300°C) (10 ⁻⁶ /K)	18	Annealing temperature (°C)*	425-625
Thermal conductivity (W/m.K)	369	Stress relieving treatment (°C)**	225-275
Thermal capacity (J/Kg.K)	385	<i>* Annealing treatment of a material leads to reduce its hardness and increase its ductility.</i>	
Electrical conductivity (% I.A.C.S.)	90	<i>** Stress relieving treatment allows to eliminate the residual stresses present in the material in order to avoid the stress corrosion cracking.</i>	

Forming		Joining	
Hot forming	Good	Soldering	
Cold forming	Excellent	Soft	Very good
Machinability	85% (Ref : CuZn39Pb3 = 100%)	Hard	Very good
Corrosion resistance		Welding	
This alloy has excellent resistance to atmospheric corrosion.		Gaz welding	Inappropriate
		Inert gas shielded arc welding	Inappropriate
		Resistance welding	Inappropriate

Mechanical properties according to EN12164

Condition of material	Diameter [mm]		Rp0,2 [Mpa] min.	Rm [Mpa] min.	A(%) min.	Hardness HB
	from	to				
M	All		As extruded - without specific mechanical properties			
R250	6	80	180	250	7	-
H080			-	-	-	80-110
R300	6	40	240	300	5	-
H095			-	-	-	95-130
R360	6	8	300	360	-	-
H120			-	-	-	> 120

Fabrication range

Available forms:



Do not hesitate to contact us for further information regarding the dimensions, tolerances and metallurgical conditions.

Our technical teams are by your side to help you succeed in your projects.

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