SOFIA MED

SM1031

Cu-HCP (Cu-Se)

Alloy characteristics

Cu-HCP is a high purity, low level residual phosphorus, deoxidized copper. It has a very high electrical and thermal conductivity, good welding and soldering properties as well as resistance to hydrogen. It has excellent hot and cold forming properties, and a good corrosion resistance in water and especially in atmosphere (including industrial atmosphere). The alloy is registered US EPA antimicrobial.

Main application: High frequency cable, Submarine cable strip, Commutators, Electrical conductors, Clad products, Bus bars, Terminals, Pressure vessels, Billet mold tube.

Mechanical properties	Temper condition			
	R200	**R240**	**R290**	**R360**
Tensile strength in N/mm² ref only	200-260	240-300	290-360	>360
0,2% yield strength in N/mm²	<100	>180	>250	>320
Vickers hardness HV	45-65	65-95	90-110	>110
Elongation $A_{L50\%}$	-	> 8	>4	>2

Physical properties (Typical values in annealed temper at 20 °C)		
Thermal expansion coefficient 20 … 300 °C	17.7	10^{-6}/K
Specific heat capacity	0.385	J/(g·K)
Density	8.94	g/cm³
Thermal conductivity	385	W/(m·K)
Thermal coefficient of electrical resistance (0 … 100 °C)	3.7	10^{-3}/K
Modulus of elasticity (1 GPa = 1 kN/mm²) cold formed	132	GPa
Electrical conductivity (IACS)	97	%

Material designation	
DIN EN	CW021A
UNS	-

Chemical composition	
Cu	99.95 %
P	0.002-0.007 %

This information was given with the best knowledge, but cannot guarantee any characteristics we describe listed above. The contract terms of Sofia Med agreed with any individual customer and our general conditions of sales describe the liability of these conditions.
In any case do we reserve the right by technical development or any other reason to modify this sheet according to our needs. This data sheet is part of a technical modification service done case by case.

Sofia Med SA, 4 Dimitar Peshev str, Gara Iskar, 1528 Sofia, Bulgaria
Tel: +35929606209, Fax: +3599606393, info@sofiamed.bg, www.sofiamed.bg
Number of sheet / reference standard / date of issue: I / I / 21.06.2017