

## Cu-ETP

Mechanical properties		Temper condition			
	R200	R220	R240	R290	R360
Tensile strength in N/mm <sup>2</sup> ref only	200-250	220-260	240-300	290-360	≥ 360
0,2% yield strength in N/mm <sup>2</sup>	≤ 100	< 140	≥ 180	≥ 250	≥ 320
Vickers hardness HV	40-65	40-65	65-95	90-110	≥ 110
Elongation A <sub>L50%</sub>	min 42	min. 33	min. 8	min. 4	min. 2
Physical properties (Typical values in annealed temper at 20 °C)					
Thermal expansion coefficient -191 ... 16°C		14.1		10 <sup>-6</sup> /K	
0 ...300°C		17.7		10 <sup>-6</sup> /K	
Specific heat capacity		0.386		J/(g·K)	
Density		8.93		g/cm <sup>3</sup>	
Thermal conductivity		394		W/(m·K)	
Thermal coefficient of electrical resistance (0 ... 200°C)		3.7		10 <sup>-3</sup> /K	
Modulus of elasticity ( 1 GPa = 1 kN/mm <sup>2</sup> ) cold formed		130		GPa	
annealed		110		GPa	
Electrical conductivity (1 MS/m = 1 m/(l mm <sup>2</sup> ))		≥ 58		MS/m	
Electrical conductivity (IACS)		100		%	

Material designation	
EN	Cu-ETP (E-Cu, E-Cu58)
UNS	C11000
DIN CEN/TS 13388	CW004A
JIS	C1100

Chemical composition	
Cu	≥ 99.90 %
O	0.005 .. 0.040 %

*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.*