

Cu-PHC

Designation	EN / Cu-PHC	EN / CW020A	UNS / C10300
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This very pure copper has been deoxidized by a defined addition of Phosphorus and it finds its main usage brazing and welding (this material is immune against hydrogen embrittlement). Cu-PHC shows excellent performance in dynamic bend tests and is therefore well established as conductor material for flexible-flat-cables (FFC) for which thin copper foil is used.

COMPOSITION OF MATERIAL

- Cu: $\geq 99,9\%$
- P: $\leq 0,006\%$

PHYSICAL PROPERTIES

• Density	8,93 g/cm ³
• Melting point	1083 °C
• Electrical conductivity	min. 58 m/Ω mm ² (at 20 °C R200)
• Electrical resistivity	max. 0,017241 Ω mm ² /m (at 20 °C R200)
• Temperature coefficient of electrical resistance	3,7·10 ⁻³ /K (at 0 to 200 °C R200)
• Thermal conductivity	394 W/K m (at 20 °C)
• Thermal capacity	0,386 J/g K (at 20 °C)
• Coefficient of thermal expansion (linear)	17,7·10 ⁻⁶ /K (at 20 to 300 °C)
• Modulus of elasticity (tensile)	110 GPa (at 20 °C R200)

MANUFACTURING PROGRAM	THICKNESS	WIDTH
Rolls, spools, sheets	0,006 - 0,4 mm	0,6 - 660 mm

*not all combinations of thickness and width are available
or different dimensions please contact our technical service*

TEMPER ACCORDING TO DIN EN 13599			TYPICAL VALUES (information only)
	Tensile strength Rm in MPa	Yield strength Rp0,2 in MPa	Elongation in % L ₀ = 100 mm
R200	200 - 250	≤ 100	> 15
R220	220 - 260	≤ 140	> 15
R240	240 - 300	≥ 180	< 35
R290	290 - 360	≥ 250	< 20
R360	≥ 360	≥ 320	< 5

The values in the table are valid only for foils with thickness > 0,1 mm.

For further information please visit our website: <https://www.schlenk.com>
You will find further information at: <https://copperalliance.eu>

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