

Data sheet EN Cu-HCP/CW021A – Rolled products 99,95 % pure copper Alumeco A/S		Internal alloy name: CW021A International alloy name: EN Cu-HCP DIN-Werkstoff no.: 2.0070 Alloy type: Electrical conducting Revision date: 11-01-2021					
Main usage <ul style="list-style-type: none"> • Electrical conductors • Industrial applications 	Main properties <ul style="list-style-type: none"> • High thermal and electrical conductivity • Good atmospheric corrosion resistance • Good welding and soldering properties as well as resistance to hydrogen 	EN13599 Copper and copper alloys - Copper plate, sheet and strip for electrical purposes	EN 1655 Copper & copper alloys, declaration of conformity.				
		EN 10204 Metallic products - types of Inspection certificates					
Chemical composition (%) DIN EN 13599							
Cu	Bi	P	Pb	Other elements			
99.95	Max. 0.0005	0,002-0,007	Max. 0.005	Each together - 0.03			
Typical mechanical properties DIN EN 13599							
Material condition	Thickness range (mm)	Rm MPa	Rp_{0,2} MPa	A_{50mm} for thickness up to 2,5mm %	A for thickness up to 2,5mm %	Hardness HBW	Hardness HV
R220 (soft)	0,1 - 5	220-260	Max. (140)	33	42	-	-
R240(1/2 hard)	0,1 – 10	240-300	Min. 180	8	15	-	-
** Information values only							
Physical properties							
Density (20 °C) g cm⁻³	Solidification range °C	Electrical conductivity %IACS	Thermal conductivity (20 °C) W m⁻¹ K⁻¹	Thermal expansion (20-300 °C) μm m⁻¹ K⁻¹	Annealing temperature °C	E - modulus (20 °C) N mm⁻²	
8,9	1083	100	386	17,7	371-649	-	
Properties and information							
Fabrication Properties				Joining Methods			
Hot Formability		Excellent - 750-950°		Soldering		Excellent	
Cold Formability		Excellent		Brazing		Excellent	
				MIG Welding		Excellent	
				Gas-shielded arc welding		Good	