

Material data sheet

CuCo1Ni1Be (CW103C)

1) Chemical composition according to DIN EN 573-3 [% by mass, remainder Al]

%	Cu	Al	Be	Co	Fe	Ni	Pb	Sn	Zn	Each
min.	Remainder	-	0.4	0.8	-	0.8	-	-	-	-
max.	-	-	0.7	1.3	0.2	1.3	-	-	-	0.5

2) Mechanical properties according to DIN EN 12163

Temper	Dimensions in mm		R _m MPa		R _{p0,2} MPa		A%	HB
	D ^a	S ^b	min.	max.	min.	max.	min.	Typical value
R680	2<D≤100	2<S≤100	680	-	550	-	10	-
R730	2<-D≤60	2<S≤60	730	-	610	-	8	-

D^a = Diameter for round rod / S^b = Width across flat for square and hexagonal rod, Thickness for rectangular rod / c Properties may be obtained by press quenching.

Physical properties		Fabrication properties	
Density g/cm ³	8.8	Machinability	poor
Modulus of elasticity MPa	135	Cold-working properties	poor
Thermal conductivity W/(m K)	240	Hot-working properties	fair
Coefficient of thermal expansion (20-100 °) 10 ⁻⁶ /K	17		
Electrical conductivity MS/m	26-30		
General properties			
In the precipitation-hardened temper high strength values. Good temperature resistance. High electrical and thermal conductivity. Wear-resistant. Electrodes for electric resistance welding or at high welding pressures.			

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