CUPRO CB

Chemical Composition (%)

Be	Co	Others	Cu
0.4-0.7	2.0-2.8	max 0.5	rest

Code

DIN: 2.1285, EN: CW104C, UNS No: C17500

Material Properties

Hard copper alloy with high thermal conductivity amd high mechanical properties combined with good hardness and high temperature strength.

Application Area

Spot welding electrodes and seam welding discs for stainless steel, monel and nickel alloys, flash welding dies, wire mesh electrodes, plastic blow and injection moulds and inserts in steel tools for higher cooling rates, nozzles and needles for hot runner systems, plunger tips in aluminum die casting machines, moulds for non-ferrous metal castings (as copper, brass, bronze), welding tools in plastic packaging.

Heat Treatment

Delivered in heat treated conditions.

Mechanical Properties

Hardness	HB	230-260
Tensile strength	N/mm^2	700-900
Yield strength	N/mm^2	600-700
Elongation L=5D	%	10-15
Modulus of elasticity (20 °C)	GPa	130

Physical Properties

Electrical conductivity	MS/m	25-30
Coefficient of thermal expansion (273 - 573 K)	$10^{-6}/K$	17
Thermal conductivity (20 °C)	(W/mK)	200-230
Density	(g/cm^3)	8.75