



TRB₄ (CuCoNiBe)

technical datasheet

CHEMICAL COMPOSITION

Cu	Co	Be	Zr	Ni	Si	Other
Rest	0,8-1,3	0,4-0,7		0,8-1,3		

SPECIFICATIONS

DIN : 2,1285	ASTM: C17500	RWMA: CLASS III
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MECHANICAL PROPERTIES

Tensile Strenght (Rm) N/mm ²	: 650-800
Yield Strenght (Rp 0,2) N/mm ²	: 500-700
Elongation (A5) %	: Min 8
Hardness (HB 30)	: 220-250
Elastic Modulus	: 135 x 10 ³ N/ mm ²

DESRPTION OF MATERIAL

CuCoNiBe Copper Alloy contains approximately 1% Cobalt, 1% Nickel, 0,5% Beryllium. After hot forging and heat treatment processes; this material gains considerably good hardness, grain size, electrical and thermal conductivities. It is possible to reach different combinations of electrical conductivity and hardness by changing the heat treatment conditions.

PHYSICAL PROPERTIES

Density	: 8,85 g/ cm ³
Specific Heat	: 0,42 j/g.k
Electrical Conductivity	: 24-30 MS/ m
Electrical Conductivity (I.A.C.S.)	: 38-48 %
Termal Conductivity	: 210-320 W/ m.K
Coefficient of Thermal Expansion	: 20-100 °C 17,0 X 10 ⁻⁶ /K
Working Temperature	: 480 °C maks.

APPLICATIONS

Welding electrodes, electrode holders and seam welding discs in resistance welding. Plunger tips in Aluminium Die Casting industry. Injection nozzles, cooling inserts in plastic injection industry. Moulds for casting of non-ferrous material. Chill moulds in casting of brass and bronze material. Due to its good surface quality, homogen and fast cooling rate this alloy has an excelent working performance.