



TRBNS₂ (CuNiSi)

technical datasheet

CHEMICAL COMPOSITION

Cu	Cr	Be	Zr	Ni	Si	Other
Rest	0,3-0,5			2,2-2,6	0,5-0,7	

SPECIFICATIONS

DIN : 2,0855	ASTM: C18000	RWMA: CLASS III
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MECHANICAL PROPERTIES

Tensile Strenght (Rm) N/mm ²	: 500-700
Yield Strenght (Rp 0,2) N/mm ²	: 450-600
Elongation (A5) %	: Min 5
Hardness (HB 30)	: 180-210
Elastic Modulus	: 131 x 10 ³ N/ mm ²

DESRPTION OF MATERIAL

TRBNS2 contains; approximately 2,4% Nickel,0,6 Silicium and 0,4% Chromium. This alloy gains relatively good hardness, electrical and thermal conductivity after hot forging and heat treatment processes. CuNiSi is Beryllium Free and alternative to CuCoNiBe alloy.

PHYSICAL PROPERTIES

Density	: 8,7 g/ cm ³
Specific Heat	: 0,38 j/g.k
Electrical Conductivity	: 26-28 MS/ m
Electrical Conductivity (I.A.C.S.)	: 45-48 %
Termal Conductivity	: 160 W/ m.K
Coefficient of Thermal Expansion	: 20-100 °C 17,5 X 10 ⁻⁶ /K
Working Temperature	: 480 °C maks.

APPLICATIONS

It uses as plunger tips in Aluminium injection industry to the alternative of CuCoNiBe. It uses also as cooling pins in plastic injection industry to the alternative of CuBe₂ and CuCoNiBe. 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.