



# TRBN<sub>4</sub> (CuNiBe)

## technical datasheet

### CHEMICAL COMPOSITION

Cu	Co	Be	Zr	Ni	Si	Other
Rest	>0,3	0,2-0,6		1,4-2,2		

### SPECIFICATIONS

DIN : 2,0850	ASTM: C17510	RWMA: CLASS III
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### MECHANICAL PROPERTIES

Tensile Strenght (Rm) N/mm <sup>2</sup>	: 640-760
Yield Strenght (Rp 0,2) N/mm <sup>2</sup>	: 500-650
Elongation (A5) %	: Min 8
Hardness (HB 30)	: 240-280
Elastic Modulus	: 138 x 10 <sup>3</sup> N/ mm <sup>2</sup>

### DESRPTION OF MATERIAL

CuNiBBe copper alloy contains; approximately 0,3% Cobalt, 1,8% Nickel and 0,4% Beryllium. This material gains considerably good hardness with good electrical and thermal conductivity after hot forging and heat treatment processes.

### PHYSICAL PROPERTIES

Density	: 8,86 g/ cm <sup>3</sup>
Specific Heat	: 0,40 j/g.k
Electrical Conductivity	: 24-30 MS/ m
Electrical Conductivity (I.A.C.S.)	: 34-48 %
Termal Conductivity	: 210-310 W/ m.K
Coefficient of Thermal Expansion	: 20-100 °C 17,0 X 10 <sup>-6</sup> /K
Working Temperature	: 480 °C maks.

### APPLICATIONS

Welding electrodes, electrode holders and seam welding discs in resistance welding. It uses rarely as plunger tips in Aluminium Die Casting industry. It uses also 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 too.