



TRC₄ (CuCo₂Be) technical datasheet

CHEMICAL COMPOSITION

| Cu | Co | Be | Zr | Ni | Si | Other |
|------|---------|---------|----|-----|----|-------|
| Rest | 2,2-2,7 | 0,4-0,7 | | 0,3 | | |

SPECIFICATIONS

| | | |
|--------------|--------------|-----------------|
| DIN : 2,1285 | ASTM: C17500 | RWMA: CLASS III |
|--------------|--------------|-----------------|

MECHANICAL PROPERTIES

| | |
|---|--|
| Tensile Strenght (Rm) N/mm ² | : 650-800 |
| Yield Strenght (Rp 0,2) N/mm ² | : 500-700 |
| Elongation (A5) % | : Min 5 |
| Hardness (HB 30) | : 230-280 |
| Elastic Modulus | : 135 x 10 ³ N/ mm ² |

DESRPTION OF MATERIAL

CuCo₂Be copper alloy contains; approximately 2,5% Cobalt, 0,3% Nickel and 0,5% Beryllium. This material gains considerably good hardness with good electrical and thermal conductivity after hot forging and heat treatment processes. It has also slightly better mechanical and physical properties than CuCoNiBe.

PHYSICAL PROPERTIES

| | |
|------------------------------------|--|
| Density | : 8,86 g/ cm ³ |
| Specific Heat | : 0,40 j/g.k |
| Electrical Conductivity | : 24-30 MS/ m |
| Electrical Conductivity (I.A.C.S.) | : 34-48 % |
| Termal Conductivity | : 210-240 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. 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.