TUNÇDEMİR METAL
SANAYİ VE TİCARET LİMİTED ŞİRKETİ

C17510

C17510 (UNS) | CUNIBE | RWMA CLASS 3 | DIN 2.0850 | CW110C

Product Description and Features

C17510 (Nickel Beryllium Copper) is a high-performance alloy combining moderate conductivity (45-60% IACS) with high mechanical strength. It is reliably preferred in demanding engineering applications requiring both electrical conductivity and mechanical strength.

- **High Strength:** Tensile strength reaching 900 MPa levels after heat treatment.
- **Conductivity:** Excellent balance of electrical and thermal conductivity.
- **Fatigue Resistance:** Long service life under repeated loading.
- **Corrosion Resistance:** Resistant to harsh environmental conditions.

CHEMICAL COMPOSITION (%)

Element	Value Range
Nickel (Ni)	% 1.4 - 2.2
Beryllium (Be)	% 0.2 - 0.6
Aluminum (Al)	Max % 0.20
Copper (Cu)	Balance (Min. %99.5)

TYPICAL APPLICATIONS

Welding Technologies	Projection welding electrodes, discs, spot welding tips (Class 3).
Electrical & Electronics	Heavy-duty connectors, relay parts, switch contacts.
Metal Injection	Plunger tips - For thermal shock resistance.
Industrial	Springs, fasteners, plastic mold cooling inserts.

MECHANICAL AND PHYSICAL PROPERTIES

Property	Value
MECHANICAL PROPERTIES	
Hardness	230 - 260 HB
Tensile Strength	700 - 900 N/mm²
Yield Strength	600 - 700 N/mm²
Modulus of Elasticity (20°C)	130 GPa
Elongation (L=5D)	% 10 - 15
PHYSICAL PROPERTIES	
Electrical Conductivity	25 - 30 MS/m
Coefficient of Thermal Expansion	17 x 10^{-6} /K
Thermal Conductivity (20°C)	200 - 230 W/mK
Density	8.75 g/cm³