



Product Description and Features

C18150 (Copper Chromium Zirconium) is a special alloy combining high electrical conductivity with mechanical strength, especially suitable for high-temperature operating conditions. It prevents sticking in resistance welding electrodes and offers long service life.

- **High Conductivity:** Provides superior electrical and heat transfer with a value of 45 MS/m.
- **Thermal Resistance:** Shows high resistance to softening during operation.
- **Class 2 Compliance:** Fully meets RWMA Class 2 standards.
- **Service Life:** Resistant to deformation under severe welding conditions.

CHEMICAL COMPOSITION (%)

Element	Value Range
Chromium (Cr)	% 0.50 - 1.50
Zirconium (Zr)	% 0.02 - 0.20
Copper (Cu)	Balance (Min. %99.7)

TYPICAL APPLICATIONS

Resistance Welding	Spot welding electrodes, seam welding wheels, electrode holders.
Automation	Robotic welding arms and tips, shafts.
Electrical & Energy	High current switches, circuit breaker contacts, and switchgear parts.
Mold Industry	Areas requiring rapid cooling in plastic injection molds.

MECHANICAL AND PHYSICAL PROPERTIES

Property	Value
Hardness	135 - 170 HB
Tensile Strength	400 - 500 N/mm ²
Yield Strength	320 - 410 N/mm ²
Modulus of Elasticity (20°C)	122 GPa
Elongation (L=5D)	% 18
Electrical Conductivity	45 MS/m
Coefficient of Thermal Expansion	17 x 10 ⁻⁶ /K
Thermal Conductivity (20°C)	320 W/mK
Density	8.9 g/cm ³