



Product Description and Features

C18000 (Nickel Silicon Chrome Copper) is a special alloy that combines high mechanical strength with good electrical conductivity and can be hardened by heat treatment. It is ideal for industrial applications requiring both high temperature resistance and wear resistance.

- **High Hardness:** Excellent wear resistance after heat treatment.
- **Thermal Resistance:** Resistance to softening at high temperatures.
- **Machinability:** Suitable for precision machining.
- **Standard Compliance:** Fully meets RWMA Class 3 norms.

CHEMICAL COMPOSITION (%)

Element	Value Range
Nickel (Ni) + Cobalt (Co)	% 1.8 - 3.0
Silicon (Si)	% 0.40 - 0.8
Chromium (Cr)	% 0.10 - 0.8
Copper (Cu)	Balance

TYPICAL APPLICATIONS

Resistance Welding	Electrode tips, welding discs, and arms (Spot/Seam).
Mold Industry	Plastic injection molds, cooling inserts.
Metal Injection	Plunger Tips - For friction resistance.
Electrical	High current carrying switch parts and contacts.

MECHANICAL AND PHYSICAL PROPERTIES (TYPICAL)

Property	Value
Hardness (BRINELL HARDNESS)	190-230 HB
Tensile Strength	600 - 750 N/mm ²
Yield Strength	450 - 600 N/mm ²
Electrical Conductivity	Min. 45% IACS (26 MS/m)
Thermal Conductivity	~ 200 - 220 W/m·K
Density	8.7 g/cm ³