

UNS C18000

Materion Performance Alloys' UNS C18000 is a low cost copper nickel silicon chromium alloy with high electrical and thermal conductivity possessing good strength and hardness. Typical applications include resistance welding equipment and injection mold and blow mold cores and cavities.

CHEMICAL COMPOSITION (weight percent)

Alloy	Nickel	Silicon	Chromium	Copper
C18000	1.8 – 3.0	0.4 – 0.8	0.1 – 0.8	Balance

TYPICAL PHYSICAL PROPERTIES

Elastic Modulus	Melting Point (Solidus)	Electrical Conductivity	Density	Thermal Expansion	Thermal Conductivity (25 °C)	Heat Capacity (25 °C)
18,500 ksi 130 GPa	~1900 °F ~1040 °C	48% IACS 28 MS/m	.318 lb/in ³ 8.81 g/cm ³	9.72 x 10 ⁻⁶ °F ⁻¹ 17.5 x 10 ⁻⁶ °C ⁻¹	130 BTU/hr ft · °F 225 W/m · °C	.095 BTU/lb · °F 0.398 J/g · °C

TYPICAL MECHANICAL PROPERTIES*

0.2% Offset Yield Strength	Ultimate Tensile Strength	Elongation	Hardness
75 ksi 520 MPa	95 ksi 655 MPa	14%	92 HRB (~15 HRC)

*Properties may vary by shape and thickness

FORMS AVAILABLE

Rounds, square and rectangular bars, plate and forged rings.

SPECIFICATIONS AND STANDARDS

UNS C18000

RELATED INFORMATION

Additional technical information on UNS C18000 and MoldMAX[®] products can be obtained by visiting www.MoldMax.com or calling 800-375-4205 (USA). For pricing and availability in North America, contact the sales.

North American Service Centers – Sales Inquiries

For bar, tube, plate/sheet >0.060” (1.5 mm) thick
and rod >0.5” (12.7 mm) diameter:

Warren, MI

TOLL FREE: 800-521-8800
LOCAL: +(1) 586-772-2700
FAX: +(1) 586-772-2472

International Sales Offices

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MATERION CORPORATION

www.materion.com/alloys

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