

High performance alloy C18080

Standard

DIN: CuCrAgFeTiSi
 EN: CuCrAgFeTiSi
 UNS: C18080 ASTM B936

Applications

Applied to high current (above 5A) electronic components, semiconductor components, connectors, relay springs

Chemical Composition (%)

Cu: Remainder
 Cr: 0.2-0.7
 Ti: 0.01-0.15
 Fe: 0.02-0.2
 Si: 0.01-0.1
 Ag: 0.01-0.3

Physical Properties

Density (g/cm ³)	8.92
Electrical conductivity IACS%(20°C)*	79
Modulus of elasticity (KN/mm ²)	140
Coefficient of thermal expansion 10 ⁻⁶ /K	17.6
Thermal conductivity W/(m*K)	320

*value for the lowest temper class

Merit

C18080 has very high electrical and thermal conductivity. Excellent formability and high resistance to stress relaxation make it the material of choice for high pressure and high temperature connectors.

Mechanical Properties

Temper		Tensile Strength Mpa	Yield Strength Mpa	Elongation %	Hardness HV
R480	TM04	450-560	min. 450	min. 7	140-170
R540	TM08	540-630	min. 520	min. 2	150-180
TR08		520-620	min. 500	min. 7	160-190

Physical properties of the above materials are conventional performance indicators. If you have some special requirements, (for example property and tolerance), please contact Kinmachi Company directly, we will give you professional assessments and answers.

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Shanghai Kinmachi New Material Tecnology Co., Ltd.
 Kinmachi Industry (Hong Kong) Co., LTD

Tel:021-62968227 Fax:021-62968237
 Email:candy_wu@kinmachi.com