

## High Performance Alloy C18070

### Standard

DIN: CuCrSiTi  
 EN: CuCrSiTi  
 UNS: C18070

### Applications

Main applications are electric vehicles, hybrid applications, electrical contacts, automotive connectors, photovoltaic systems and electronic components.

### Chemical Composition (%)

Cu: Remainder  
 Cr: 0.14-0.4  
 Ti: 0.01-0.4  
 Si: 0.02-0.07

### Physical Properties

Density (g/cm <sup>3</sup> )	8.88
Electrical conductivity IACS%(20°C)*	78
Modulus of elasticity (KN/mm <sup>2</sup> )	138
Coefficient of thermal expansion 10 <sup>-6</sup> /K	18
Thermal conductivity W/(m*K)	310

\*value for the lowest temper class

### Merit

C18070 is a precipitation hardening copper alloy, which has high electrical conductivity, good strength, good bending properties, excellent cold and hot formability and good corrosion resistance. At the same time, due to the relaxation characteristics of the precipitate, it has excellent stress relaxation resistance, and the stress is also very good under the high temperature condition of 200 °C.

### Mechanical Properties

Temper		Tensile Strength Mpa	Yield Strength Mpa	Elongation %	Hardness HV
R400	H01	400-480	min. 300	min. 8	120-150
R460	H02	460-560	min. 370	min. 5	140-170
R530	H04	530-610	min. 460	min. 2	150-190

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.

[www.kmcmetals.com](http://www.kmcmetals.com)

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