

Alloy Designation	
EN	CuCrSiTi
DIN	CuCrSiTi
UNS	C18070
JIS	/

Chemical Composition		
Cr Ti	0.14 - 0.4	%
	0.01 - 0.4	%
Si Cu	0.02 - 0.07 remainder	%

Characteristics
C18070 / CuCrSiTi is a Cu–Cr–Si–Ti precipitation-hardening copper alloy. Precipitates (mainly titanium silicides) enable strengthening by cold work or aging, delivering high strength with >80 %IACS conductivity, good formability and bendability, and excellent relaxation resistance up to ~200 °C—ideal for high-current connectors.

Main Applications
Electric vehicles Hybrid applications
Electrical contacts
Automotive connectors, Clips
Photovoltaic systems Electronic components.

Physical Properties (Reference values at room temperature)		
Density	g/cm ³	8.9
Electrical conductivity	IACS%(20°C)*	78
Modulus of elasticity	KN/mm ²	136
Coefficient of thermal expansion	10 ⁻⁶ /K	18
Thermal conductivity	W/(m*K)	310

*value for the lowest temper class

Mechanical Properties				
TEMPER	Tensile Strength Mpa	Yield Strength Mpa	Elongation %	Hardness Hv
R400	400 - 480	min. 300	min. 8	120 - 150
TR02	430 - 570	min. 370	min. 7	130 - 150
R460	460 - 560	min. 400	min. 9	140 - 170
R530	530 - 610	min. 460	min. 8	150 - 190
R550	550 - 630	min. 520	min. 7	150 - 190

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