

Alloy Designation	
EN	CuCrAgFeTiSi
DIN	CuCrAgFeTiSi
UNS	C18080 ASTM B936
JIS	/

Chemical Composition		
Cr	0.2 - 0.7	%
Ag	0.01 - 0.3	%
Fe	0.02 - 0.2	%
Ti	0.01 - 0.15	%
Si	0.01 - 0.1	%
Cu	remainder	

Characteristics
C18080 exhibits high electrical conductivity at 392°F (about 200°C), making it suitable for electrical applications. Stress Resistance: This alloy has good stress resistance, maintaining stable performance under high loads and at elevated temperatures. C18080 has excellent formability, accommodating various processing methods, including both cold and hot working.

Main Applications
Widely used in automotive electrical systems, such as switches
Suitable for high-conductivity components
electronic and electrical integrated circuits, power transistors
Relay springs

Physical Properties (Reference values at room temperature)		
Density	g/cm ³	8.91
Electrical conductivity	IACS%(20°C)*	80
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

Mechanical Properties					
TEMPER		Tensile Strength Mpa	Yield Strength Mpa	Elongation %	Hardness Hv
R480	TM04	480 - 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

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