

Alloy Designation	
EN	CuNi3SiMg
DIN	CuNi3SiMg
UNS	C70250 ASTM B422 B888
JIS	/

Chemical Composition		
Ni	2.2 - 4.2	%
Si	0.25 - 1.2	%
Mg	0.05 - 0.3	%
Cu	min. 96.2	%

Characteristics
C70250 is a Cu–Ni–Si precipitation-hardening Corson alloy with minor Mg and aging that yields fine Ni–Si precipitates. It attains high strength after cold work or heat treatment while preserving good formability. It resists thermal stress-relaxation up to about 150 °C and, when tin-plated, keeps the coating under short high-temperature exposure (e.g., 150 °C for 3 h). C70250 also has good electrical and thermal conductivity plus reliable solderability and good brazability.

Main Applications
Automotive: Switches and Relays, Contacts, Connectors, Terminals.
Industrial: Switches and Relays, CPU sockets, Contacts, Connectors, Terminals, Components for the electrical industry, Stamped parts, Semiconductor Components, non-magnetic lead frame material for sensors

Physical Properties (Reference values at room temperature)		
Density	g/cm ³	8.83
Electrical conductivity	IACS%(20°C)*	40
Modulus of elasticity	KN/mm ²	130
Coefficient of thermal expansion	10 ⁻⁶ /K	17.7
Thermal conductivity	W/(m*K)	190

*value for the lowest temper class

Mechanical Properties							
TEMPER		Tensile Strength Mpa	Yield Strength Mpa	Elongation %	Hardness HV (only for reference)	Bending Test(90°) GW BW	
R620	TM00	620 - 760	min. 450	min. 10	(180 - 240)	0	0
R650	TM02	650 - 825	min. 585	min. 7	(190 - 250)	1	1
R690	TM03	690 - 860	min. 655	min. 5	(200 - 250)	1.5	1.5
R760	TM04	760 - 840	min. 720	min. 7	(210 - 260)	3	3
TR02		608 - 725	550 - 650	min. 6	(180 - 220)	0.5	3

*This leaflet is for general information only and is not subject to revision. No claims can be derived from it unless there is evidence of intent or gross negligence. The data given are no warranty that the product is of a specified quality and they cannot replace expert advice or the customer’s own test.