



Main application

Connectors, Springs

Characteristics

- Mg-modified Corson alloy (Cu-Ni-Si)
- Good in bend formability and high electrical conductivity for connectors.
- Particularly suitable for replacement of beryllium copper alloy, with eco-friendliness and cost competitiveness for its chemical composition.
- Very good stress relaxation and heat resistance properties at elevated temperature.
- No heat treatment required for hardening.

Nominal Chemical Composition

Ni	Si	Mg	Cu
3.0	0.65	0.15	Bal.

(wt.%)

Physical Properties *

Density at 20°C	g/cm ³	8.82
Modulus of Elasticity	kN/mm ²	132
Electrical Resistivity	$\mu\Omega \cdot m$	4.3×10^{-2}
Thermal Conductivity at 20°C	W/(m · K)	1.72×10^2
Coefficient of Thermal Expansion at 20-300°C	$\times 10^{-6}/^{\circ}C$	17.3
Melting Point Liquidus	°C	1095
Melting Point Solidus	°C	1075

* Reference value only.

Mechanical Properties

Temper	Yield Strength (0.2% offset) N/mm ²	Tensile Strength* N/mm ²	Elongation* %	Hardness* HV	Electrical Conductivity* %IACS
TM00	450-620	620-760	10min	≥ 180	40min
TM02	590-760	655-830	7min	≥ 190	40min
TM03	655-830	690-860	5min	≥ 200	35min
TM03 HDC**	690-830	710-860	3min	-	45min

1)* Reference value only.

2) In each temper, covered thickness range for production is limited.

3)**HDC (High Density Connector) : Developed specifically for socket contacts demanding very narrow tight bend performance.

Minimum Bending Radius *

Temper	90° MBR/t GW/BW
TM00	1.5/1.25
TM02	2.5/1.5
TM03	2.5/2.0
TM03 HDC	-

* Reference value only.