

Wieland-K55

CuNi3SiMg | High copper alloy

Material designation

EN	–
UNS	C70250

Chemical composition*

Cu	balance
Ni	3 %
P	0.65 %
Mg	0.15 %
Pb	< 0.05 %

* Reference values in % by weight

Physical properties*

electrical conductivity in precipitation hardened condition	MS/m	29
	%IACS	50

Thermal conductivity	W/(m·K)	190
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Thermal expansion coefficient (0–300 °C)	10 ⁻⁶ /K	17.6
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Density	g/cm ³	8.82
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Modulus of elasticity	GPa	130
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* Reference values at room temperature

Corrosion resistance

Wieland-K55 has good corrosion resistance in natural atmosphere. It is insensitive to stress corrosion cracking.

Product standards

nicht genormt

Material properties and typical applications

Wieland K55 is a high-performance alloy with low contents of nickel and silicon. It is precipitation hardened and exhibits high strength, good electrical conductivity and good bending properties. Moreover, it possesses excellent resistance to stress relaxation at elevated temperatures of up to 200 °C.

The material is lead free according to RoHS and ELV.

Types of delivery

The Extruded and Drawn Products Division supplies bars, wire, sections and tubes. Please get in touch with your contact person regarding the available delivery forms, dimensions and tempers.

Fabrication properties

Forming*

Machinability (CuZn39Pb3 = 100 %)	25 %
Capacity for being cold worked	good
Capacity for being hot worked	poor

Surface treatment

Polishing	
mechanical electrolytic	good
Electroplating	good

Joining

Resistance welding (butt weld)	fair
Inert gas shielded arc welding	excellent
Gas welding	fair
Hard soldering	good
Soft soldering	good

Heat treatment

Melting range	1,040–1,085 °C
Hot working	800–950 °C
Soft annealing	600–700 °C 1–3 h
Thermal stress relieving	–

Trademarks



Further information is provided in our brochures on WITRONIC and WICONNEC.