

Wieland-K55

CuNi3SiMg
High copper alloy

Extruded and drawn products



Material designation	
EN	–
UNS	C70250

Chemical composition*	
Cu	balance
Ni	3 %
Si	0.65 %
Mg	0.15 %

* Reference values in % by weight

Physical properties*		
Electrical conductivity in precipitation hardened condition	MS/m	29
	%IACS	50
Thermal conductivity	W/(m·K)	190
Thermal expansion coefficient (0–300 °C)	10 ⁻⁶ /K	17.6
Density	g/cm ³	8.82
Modulus of elasticity	GPa	130

* 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
no EN standard

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.

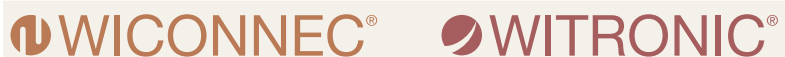
Types of delivery

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

Fabrication properties

Forming		Surface treatment	
Machinability (CuZn39Pb3 = 100 %)	25 %	Polishing	
Capacity for being cold worked	good	mechanical	good
Capacity for being hot worked	poor	electrolytic	good
		Electroplating	good
Joining		Heat treatment	
Resistance welding (butt weld)	fair	Melting range	1.040–1.085 °C
Inert gas shielded arc welding	excellent	Hot working	800–950 °C
Gas-welding	fair	Solution annealing	600–700 °C 1–3 h
Hard soldering	good	Thermal stress-relieving	–
Soft soldering	good		

Trademarks



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