

Wieland-N35
CuNi15Zn23Pb2
Nickel silver (lead)

**Extruded and
drawn products**



Material designation	
EN	not standardized
UNS	not standardized

Chemical composition*	
Cu	61 %
Ni	15 %
Pb	2 %
Zn	balance

* Reference values in % by weight

Physical properties*		
Electrical conductivity	MS/m %IACS	3.5 6
Thermal conductivity	W/(m·K)	50
Thermal expansion coefficient (0–300 °C)	10 ⁻⁶ /K	18
Density	g/cm ³	8.69
Modulus of elasticity	GPa	135

* Reference values at room temperature

Corrosion resistance

Nickel silver generally exhibits good corrosion resistance to atmospheric influences, organic substances (perspiration, environmental influences) as well as alkaline and neutral saline solutions.

Product standards	
EN	not standardized

Material properties and typical applications

Wieland-N35 is a silver-coloured material especially developed for tips for ballpoint pens and is, meanwhile, used by wellknown manufacturers of writing utensils. This alloy combines good machinability with good cold working properties. Tips made out of **Wieland-N35** have a good resistance to wear and corrosion and result in a beautiful type face.

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		Surface treatment	
Machinability (CuZn39Pb3 = 100 %)	70 %	Polishing	
Capacity for being cold worked	good	mechanical	good
Capacity for being hot worked	poor	electrolytic	fair
		Electroplating	good
Joining		Heat treatment	
Resistance welding (butt weld)	good	Melting range	935–1060 °C
Inert gas shielded arc welding	fair	Hot working	850–925 °C
Gas welding	poor	Soft annealing	500–700 °C 1–3 h
Hard soldering	fair	Thermal stress relieving	200–300 °C 1–3 h
Soft soldering	excellent		

Trademarks



Further information is provided in our brochure SCRIPTOLINE.