Wieland-N35
CuNi15Zn23Pb2 | Nickel silver (leaded)

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 3.5
%IACS 6
Thermal conductivity W/(m·K) 50
Thermal expansion coefficient (0–300 °C) 10^-6/K 18
Density g/cm³ 8.69
Modulus of elasticity GPa 135
* Reference values at room temperature

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 BU Extruded Products 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 %) 70 %
Capacity for being cold worked good
Capacity for being hot worked poor

Surface treatment
Polishing mechanical
good
electrolytic fair
Electroplating good

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

Heat treatment
Melting range 935–1060 °C
Hot working 850–925 °C
Soft annealing 500–700 °C 1–3 h
Thermal stress relieving 200–300 °C 1–3 h

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

Joining

Product standards
not standardized

Trademarks
scriptoline®
Further information is provided in our brochure scriptoline.