

Wieland-BC9 Nickel-free alloy

Extruded/ Drawn Products

Wieland

Wieland-BC9 is nickel-free and therefore highly suitable for products for everyday use that come into direct contact with the skin. BC9 meets the stringent human ecological requirements of the textile industry and was awarded the Öko-Tex Certificate No. Z1.0.8293. The alloy is characterized by very high mechanical strength combined with good elongation. The golden, very decorative surface can be easily polished and coated. Processing (machining, polishing, joining, coating) is done with usual equipment and tools.

Composition*

Cu	balance
Sn	15 %
Fe	1 %
Ti	0.1 %

* reference values in weight %

Material Designation

Material is not standardized

Physical Properties*

Electrical conductivity	MS/m % IACS	5 8
Thermal conductivity	W/m*K	< 50
Density	g/cm ³	8.7
Modulus of elasticity	kN/mm ²	85

* Reference values at ambient temperature
1 N/mm² = 1 MPa
1 MS/m = 1 m/(Ω · mm²)

Processing Properties

Forming

Machinability (CuZn39Pb3 = 100%)	40 %
Capacity for being cold worked	good
Capacity for being hot worked	good

Joining

Resistance welding	good
Brazing	excellent
Soldering	excellent

Surface Treatment

Polishing mechanically	excellent
Electroplating	excellent

Heat Treatment

Melting range	800 - 950 °C
Hot working	640 - 700 °C
Soft annealing	600 - 700 °C, 1-3 h
Thermal stress-relieving	300 - 400 °C, 1-3 h

Corrosion Resistance

CuSn alloys generally exhibit good corrosion resistance to atmospheric influences, organic substances (sweat, environmental influences) as well as alkaline and neutral saline solutions.

Mechanical Properties (indicated for wires)

Reference values		drawn*	soft*
R _m	[N/mm ²]	770	600
R _{p0.2}	[N/mm ²]	570	250
A ₁₀	[%]	19	45
HV		215	140

* Reference values can be achieved with standard production (for information only).

Materials and Sizes Available

Material			Round tubes				Sections / sectional tubes				Rods/wires		Availability
			Outside diam. mm		Wall thickness mm		circumscribing diameter mm				Diameter / a/fl. mm		
Wieland	EN-designation Brief designation	Number	from	to	from	to	from	to	to	to	from	to	
BC9	-	-	-	-	-	-	2,5	50	80	-	*	-	

* on request



Wieland

WIELAND-WERKE AG
www.wieland.de

Drawn Products
Division

89079 Ulm, Graf-Arco-Str. 36, Germany, Phone: +49 (0)731 944-0, Fax: +49 (0)731 944-2772

This leaflet is for your general information only and is not subject to revision. No claims can be derived from it unless there is evidence of intent or gross negligence. The data given are no warranty that the product is of a specified quality and they cannot replace expert advice or the customer's own tests.