Wieland-LV7

Extruded/ drawn products

Wieland-LV7 is a copper-nickel-manganese alloy and almost silver in colour. In soft-annealed temper Wieland-LV7 has good processing properties. Through a specific heat treatment it is possible to achieve very high strength and excellent spring properties.

Chemical composition

Cu	balance
Ni	20.0 %
Mn	20.0 %

Material designation

Wieland-LV7 is not standardized.

Physical properties*

Electrical conductivity	MS/m % IACS	1.3 2
Thermal conductivity	W/m*K	10
Density	g/cm^3	8.2
Modulus of elasticity	kN/mm^2	125

* Reference values at room temperature
1 N/mm^2 = 1 MPa
1 MS/m = 1 m/(Ω · mm^2)

Processing properties

Forming

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

Joining

Resistance welding	fair
Hard soldering	good
Soft soldering	good

Surface treatment

Polishing mechanical	–
electrolytic	–
Electroplating	good

Heat treatment

Melting range	
Hot working	880 - 900 °C
Soft annealing	650 - 750 °C
Thermal stress-relieving	250 - 280 °C

Corrosion resistance

The corrosion resistance of Wieland-LV7 is as good as that of lead-free nickel-silver alloys.

Mechanical properties (indicated for rods)

Reference values*		soft	30 % cold working	30 % cold working and tempering
R_m	[N/mm^2]	450	750	> 1100
$R_{p0,2}$	[N/mm^2]	180	650	> 950
A5	[%]	35	5	> 1
HV		120	240	> 320

* Reference values can be achieved with standard production (depending on the size).

Materials and sizes available

Material			Round tubes				Sections / sectional tubes				Rods/wires		Availability
							Drawn sections		Extruded sections	Sectional tubes	Round and polygonal rods/wires		
			Outside diameter		Wall thickness		circumscribing diameter				Diameter / a/fl.		
	EN-designation		in mm				in mm				in mm		
Wieland	Brief designation	Number	from	to	from	to	from*	to	to	to	from*	to	
LV7			40	100	3	15					2	100	

Note: The limit dimensions indicated apply to simple sections.
Special sizes are to be checked in the individual case.

Wieland

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