

Wieland-S37

CuZn38Mn1Al
Special brass

Extruded and drawn products



Material designation	
EN	CuZn38Mn1Al CW716R
UNS	–

Chemical composition*	
Cu	60 %
Al	1 %
Mn	1 %
Fe	1 %
Ni	0.5 %
Pb	1 %
Zn	balance

* Reference values in % by weight

Physical properties*		
Electrical conductivity	MS/m %IACS	7.8 13
Thermal conductivity	W/(m·K)	63
Thermal expansion coefficient (0–300 °C)	10 ⁻⁶ /K	21.1
Density	g/cm ³	8.24
Modulus of elasticity	GPa	93

* Reference values at room temperature

Corrosion resistance

Special brass generally exhibits excellent corrosion resistance due to alloying elements. Wieland-S37 is characterized by good resistance to organic substances and neutral or alkaline compounds. Stress corrosion cracking should be taken into account, especially in an ammoniacal atmosphere in the presence of mechanical stress.

Product standards	
Tube	EN 12449

Material properties and typical applications

Wieland-S37 is a special brass with medium strength, high resistance to atmospheric corrosion as well as good sliding properties due to the alloying constituents manganese and aluminium. Wieland-S37 is used as standard bearing alloy for medium load applications in machine construction.

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 %)	40 %	Polishing	
Capacity for being cold worked	poor	mechanical	good
Capacity for being hot worked	good	electrolytic	poor
		Electroplating	fair
Joining		Heat treatment	
Resistance welding (butt weld)	good	Melting range	860–910 °C
Inert gas shielded arc welding	fair	Hot working	600–700 °C
Gas welding	poor	Soft annealing	500–650 °C 1–3 h
Hard soldering	fair	Thermal stress relieving	300–430 °C 1–3 h
Soft soldering	poor		

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Mechanical properties according to EN

Tubes									acc. to EN 12449
Temper	Wallthickness mm max.	Tensile strength	Yield strength	Elongation at rupture	Hardness				
		Rm MPa min.	Rp0,2 MPa min.	A %	HV		HB		
					min.	max.	min.	max.	
M	20	as manufactured – without specified mechanical properties							
R440	8	440	200	15	–	–	–	–	
H115	8	–	–	–	115	155	110	150	
R510	8	510	270	10	–	–	–	–	
H140	8	–	–	–	140	–	135	–	

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