

Wieland-MA1

CuZn30As
Brass (lead free/
dezincification resistant)

Extruded and drawn products



Material designation	
EN	CuZn30As / CW707R
UNS	–

Chemical composition*	
Cu	70%
Pb	< 0.07%
As	0.02 - 0,06%
Zn	balance

* Reference values in % by weight

Physical properties*		
Electrical conductivity	MS/m %IACS	16.3 28
Thermal conductivity	W/(m·K)	126
Thermal expansion coefficient (0–300 °C)	10 ⁻⁶ /K	19.7
Density	g/cm ³	8.55
Modulus of elasticity	GPa	114

* Reference values at room temperature

Corrosion resistance

Brass with medium copper content is generally resistant to fresh water, organic substances, neutral or alkaline compounds as well as land, marine and industrial atmospheres. Furthermore, resistance to dezincification has been improved through the addition of arsenic.

Product standards	
Tube	EN 12451

Material properties and typical applications

Wieland-MA1 is a dezincification resistant brass with excellent cold working properties and a pure α -structure. This alloy is used for applications in warm, acidic waters. It is standardized according to EN 12451 for heat exchanger tubes and is increasingly used in the UK and Australian markets. Wieland-MA1 is also suitable for coining, riveting, crimping, flanging, cold extrusion or other cold working operations.

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 %)	25 %	Polishing	
Capacity for being cold worked	excellent	mechanical	excellent
Capacity for being hot worked	fair	electrolytic	excellent
		Electroplating	excellent
Joining		Heat treatment	
Resistance welding (butt weld)	good	Melting range	910–965 °C
Inert gas shielded arc welding	fair	Hot working	750–870 °C
Gas welding	good	Soft annealing	450–680 °C 1–3 h
Hard soldering	excellent	Thermal stress relieving	200–300 °C 1–3 h
Soft soldering	excellent		

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Mechanical properties according to EN

Tubes					acc. to EN 12451	
Temper	Tensile strength	Yield strength	Elongation at rupture	Expansion	Hardness	
	R_m MPa min.	$R_{p0.2}$ MPa min.	A % min.		HV	
				% min.	min.	max.
R340	340	130	45	30	–	–
H075	–	–	–	30	75	105