

Wieland-M30/M34

CuZn30
Brass (lead free)

Extruded and drawn products



Material designation	
EN	CuZn30/CW505L
UNS	C26000

Chemical composition*	
Cu	70 %
Pb	< 0.05 %
Zn	balance

Wieland M34:	
Pb	< 90 ppm
Cd	< 50 ppm

* 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

Brasses with a high copper content are generally resistant to organic substances and neutral or alkaline compounds. They are virtually unsusceptible to stress corrosion cracking.

Product standards	
Rod	EN 12163
Wire	EN 12166
Tube	EN 12449

Material properties and typical applications

Wieland-M30 exhibits good cold working properties due to its medium copper content. This alloy is suitable for stamping, riveting, crimping, flanging, cold extrusion or other cold working operations.

With its reduced contents of lead and cadmium our **Wieland-M34** meets the requirements of the Oeko-Tex Standard 100 product class I.

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	good	electrolytic	excellent
		Electroplating	excellent
Joining		Heat treatment	
Resistance welding (butt weld)	fair	Melting range	910–965 °C
Inert gas shielded arc welding	fair	Hot working	750–870 °C
Gas welding	fair	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

Round rods / polygonal rods											acc. to EN 12163		
Temper	Diameter		Width across flat		Tensile strength	Yield strength		Elongation at rupture			Hardness		
	mm from	mm to	mm from	mm to	R _m MPa min.	R _{p0,2} MPa min. MPa max.		A100 %	A11.3 %	A %	HB		
											min.	max.	
M	all		all		as manufactured – without specified mechanical properties								
R280	4	80	4	80	280	–	250	–	40	45	–	–	
H070	4	80	4	80	–	–	–	–	–	–	70	115	
R370	4	40	4	35	370	230	–	–	14	16	–	–	
H105	4	40	4	35	–	–	–	–	–	–	105	135	
R460	4	10	4	8	460	310	–	–	7	9	–	–	
H135	4	10	4	8	–	–	–	–	–	–	135	–	

Tubes											acc. to EN 12449		
Temper	Wallthickness		Tensile strength		Yield strength		Elongation at rupture		Hardness		HB		
	mm max.		R _m MPa min.	R _{p0,2} MPa min. MPa max.		A %		HV		min. max.			
M	20		as manufactured – without specified mechanical properties										
R280	20		280	–	180	50		–	–	–	–	–	
H055	20		–	–	–	–		55	85	50	80	–	
R350	10		350	200	–	25		–	–	–	–	–	
H085	10		–	–	–	–		85	120	80	115	–	
R420	5		420	320	–	10		–	–	–	–	–	
H115	5		–	–	–	–		115	–	110	–	–	

Round wires											acc. to EN 12166		
Temper	Diameter		Tensile strength		Yield strength		Elongation at rupture			Hardness			
	mm from	mm to	R _m MPa min.	R _{p0,2} MPa min. MPa max.		A100 %	A11.3 %	A %	HV				
											min.	max.	
M	all		as manufactured – without specified mechanical properties										
R280	4	20	280	–	250	37	40	43	–	–	–	–	
H070	4	20	–	–	–	–	–	–	70	120	–	–	
R370	1.5	20	370	230	–	12	14	16	–	–	–	–	
H110	1.5	20	–	–	–	–	–	–	110	140	–	–	
R460	0.5	5	460	310	–	4	7	–	–	–	–	–	
H140	1.5	5	–	–	–	–	–	–	140	–	–	–	
R550	0.1	3	550	450	–	3	–	–	–	–	–	–	
H165	1.5	3	–	–	–	–	–	–	165	–	–	–	