

# Wieland-Z40

CuZn43Pb2Al  
Machining brass

## Extruded and drawn products



Material designation	
EN	CuZn43Pb2Al/CW624N
UNS	no EN standard

Chemical composition*	
Cu	57.5 %
Pb	2.5 %
Zn	balance

\* Reference values in % by weight

Physikalische Eigenschaften*		
Electrical conductivity	MS/m %IACS	16.4 25
Thermal conductivity	W/(m·K)	113
Thermal expansion coefficient (0–300 °C)	10 <sup>-6</sup> /K	21.4
Density	g/cm <sup>3</sup>	8.46
Modulus of elasticity	GPa	96

\* Reference values at room temperature

**Corrosion resistance**

Machining brass is generally quite resistant against organic substances as well as neutral or alkaline compounds. Stress corrosion cracking should be taken into account, especially in an ammoniacal atmosphere and whilst under mechanical stress. Dezincification in warm, acidic waters should also be taken into consideration.

Product standards	
Section	EN 12167

**Material properties and typical applications**

**Wieland-Z40** has excellent hot working properties due to its high zinc content and is particularly used for extruded sections with thin wall thicknesses and/or complex geometries.

**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 %)	80 %	<b>Polishing</b> mechanical good electrolytic poor Electroplating excellent
Capacity for being cold worked	poor	
Capacity for being hot worked	excellent	
Joining		Heat treatment
Resistance welding (butt weld)	fair	Melting range 880–895 °C Hot working 650–800 °C Soft annealing 450–600 °C 1–3 h Thermal stress relieving 200–300 °C 1–3 h
Inert gas shielded arc welding	poor	
Gas welding	poor	
Hard soldering	fair	
Soft soldering	excellent	