

Wieland-GB3/GB9

Red brass

Extruded/drawn products

Wieland-GB3 is a medium hard construction material. It is corrosion-resistant to domestic water even at elevated temperatures. The alloy is used particularly for thin-walled fittings (up to 12 mm wall thickness, 225 °C) and for the manufacture of fittings in general.

Wieland-GB9 has a slightly higher tin content than Wieland-GB3.

Chemical composition*

Cu	85.5%
Pb	5%
Sn	2%
Zn	7%
Ni	2%

* Reference values in % by weight

Material designation

EN	not standardized
DIN*	not standardized
	GC-CuSn2ZnPb, 2.1098.04
BS*	-
NF*	-

* Former national standards

Physical properties*

Electrical conductivity	MS/m	10.7
	% IACS	18
Thermal conductivity	W/(m*K)	70
Thermal expansion coefficient (0-300°C)	10 ⁻⁶ /K	17.3
Density	g/cm ³	8.9
Modulus of elasticity	GPa	70

* Reference values at room temperature

1 GPa = 1 kN/mm²

1 MS/m = 1 m/Ω • mm²

Fabrication properties

Forming

Machinability	80%
(CuZn39Pb3 = 100 %)	
Capacity for being cold worked	not possible
Capacity for being hot worked	not possible

Heat treatment

Lower melting point	850 °C
Stress relieving	400-600 °C, 2-6 h

Corrosion resistance

Cast alloys belong to the most corrosion-resistant copper alloys. They exhibit excellent resistance to atmospheric influences, carbonic acid and saline water. Also important is their resistance to seawater and their insensitivity to stress corrosion cracking.

Product standards

none

Mechanical properties (values can be achieved and are a function of size and form)

Reference values		
R _m	[MPa]	270
R _{p0.2}	[MPa]	120
A ₅	[%]	25
HB		75

Forms and sizes available

Material								
Wieland	EN designation		Outside diameter		Inside diameter	Wall thickness	Diameter / width across flats	
	Brief designation	Number	from	to	from	from*	from	to
GB3/GB9	---	---	18	142	9	■		
Round tubes								
Sections			on request					
Sectional tubes								
Round and polygonal rods							10	142

All values in mm

- Wall thickness min. 4 mm, with an outside diameter >50 mm: 9 % of the outside diameter.

Wieland - GB3/GB9

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