

## 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 <sup>-6</sup> /K	17.3
Density	g/cm <sup>3</sup>	8.9
Modulus of elasticity	GPa	70

\* Reference values at room temperature

1 GPa = 1 kN/mm<sup>2</sup>

1 MS/m = 1 m/Ω • mm<sup>2</sup>

#### 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 <sub>m</sub>	[MPa]	270
R <sub>p0.2</sub>	[MPa]	120
A <sub>5</sub>	[%]	25
HB		75

## Forms and sizes available

**Wieland - GB3/GB9**

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.

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