

Wieland-G05

Red brass

Extruded/drawn products

Wieland-G05 is a medium hard construction and bearing material with high elongation. It is mainly used in the fittings industry for water and vapour fittings up to 225°C and for pump casings subjected to normal stress.

Chemical composition*

Cu	84.5%
Zn	5%
Pb	5%
Sn	5%

* Reference values in % by weight

Material designation

EN	CuSn5Zn5Pb5-C-GC
	CC491K
UNS	-
DIN*	GC-CuSn5ZnPb
	2.1096.04
BS*	LG2-C
NF*	CuSn5Pb5Zn5

* Former national standards

Physical properties*

Electrical conductivity	MS/m	8.6
	% IACS	15
Thermal conductivity	W/(m*K)	71
Thermal expansion coefficient (0-300°C)	10 ⁻⁶ /K	18.3
Density	g/cm ³	9.0
Modulus of elasticity	GPa	93

* 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, 2-6h%

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

Cast alloys	EN 1982
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Mechanical properties (values can be achieved and are a function of size and form)

Reference values		
R _m	[MPa]	300
R _{p0.2}	[MPa]	150
A	[%]	28
HB		85

Forms and sizes available

Wieland - G05

Material								
Wieland	EN designation		Outside diameter		Inside diameter	Wall thickness	Diameter / width across flats	
	Brief designation	Number	from	to	from	from*	from	to
G05	CuSn5Zn5Pb-C-GC	CC491K	18	404	9	■		
Round tubes								
Sections			on request					
Sectional tubes			on request					
Round and polygonal rods							10	354

All values in mm

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

Wieland

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