

# Wieland-G91

CuSn11Pb2-C-GC  
Cast bronze

## Extruded and drawn products

Material designation	
EN	CuSn11Pb2-C-GC CC482K
UNS	–

Chemical composition*	
Cu	86 %
Sn	11.5 %
Pb	1.5 %

\* Reference values in % by weight

Physical properties*		
Electrical conductivity	MS/m %IACS	6.1 11
Thermal conductivity	W/(m·K)	51
Thermal expansion coefficient (0–300 °C)	10 <sup>-6</sup> /K	18
Density	g/cm <sup>3</sup>	9
Modulus of elasticity	GPa	95

\* Reference values at room temperature

### 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.

### Material properties and typical applications

**Wieland-G91** is a slide bearing material with good machinability. It has good emergency running properties and good wear resistance. In addition it can be subjected to high loads. Wieland-G91 is particularly suited for sliding plates, crankshaft bearings and toggle-lever bearings.

### 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		Heat treatment	
Machinability (CuZn39Pb3 = 100 %)	70 %	Melting range	830 – 1000 °C
Capacity for being cold worked	not possible	Thermal stress relieving	250–400°C 2–4 h
Capacity for being hot worked	not possible		

### Mechanical properties, reference values

	Tensile strength	Yield strength	Elongation at rupture	Hardness
	R <sub>m</sub> MPa min.	R <sub>p0.2</sub> MPa min.	A % min.	HBW min.
Continuous casting	280	150	5	90