

Wieland-GA9

CuSn5PB20-C-GC | Cast bronze

Material designation

EN CuSn5PB20-C-GC
CC497K

UNS –

Chemical composition*

Cu 73 %

Pb 20 %

Sn 5 %

Ni 1.5 %

*Reference values in % by weight

Physical properties*

Electrical conductivity MS/m 7.2
%IACS 12

Thermal conductivity W/(m·K) 70

Thermal expansion coefficient (0–300 °C) 10⁻⁶/K 19.3

Density g/cm³ 9.2

Modulus of elasticity GPa 80

*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.

Product standards

Cast alloys EN 1982

Material properties and typical applications

Wieland-GA9 is a very soft material with excellent emergency running properties. It can, therefore, be used in case of insufficient lubrication over a short time period. It is mainly used for water lubrication. However, in case of mixed friction increased wear is possible. Wieland-GA9 is highly resistant to sulphuric acid. It is also used for

bearings with high sliding speeds, for example, bearings for milling machinery, water pumps, cold and foil rolling mills as well as for highly stressed composite bearings in combustion engines, for example, piston pin bushings.

Types of delivery

The BU Extruded Products 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

Machinability 90 %
(CuZn39Pb3 = 100 %)

Capacity for being cold worked not possible

Capacity for being hot worked not possible

Heat treatment

Melting range 915–980 °C

Melting point of lead 327.5 °C

Thermal stress relieving 200–300 °C
1–3 h

Mechanical properties, reference values

	Tensile strength R _m MPa	Yield strength R _{p0.2} MPa	Elongation A %	Hardness HBW
Continuous casting	180	90	7	50