

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 %IACS	7.2 12
Thermal conductivity	W/(m·K)	70
Thermal expansion coefficient (0–300 °C)	10 ⁻⁶ /K	19.3
Density	g/cm ³	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 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 %)	90 %	Melting range	915–980 °C
Capacity for being cold worked	not possible	Melting point of lead	327.5 °C
Capacity for being hot worked	not possible	Thermal stress relieving	200–300 °C 1–3 h

Mechanical properties, reference values

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