

Wieland-G21

CuSn10Pb10-C-GC
Lead bronze

Extruded and drawn products



Material designation	
EN	CuSn10Pb10-C-GC CC495K
UNS	–

Chemical composition*	
Cu	80 %
Pb	9,5 %
Sn	10 %

* Reference values in % by weight

Physical properties*		
Electrical conductivity	MS/m %IACS	5,9 10
Thermal conductivity	W/(m·K)	50
Thermal expansion coefficient (0–300 °C)	10 ⁻⁶ /K	18.7
Density	g/cm ³	9
Modulus of elasticity	GPa	85

* 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-G21 belongs to the group of lead bronzes. It is a bearing material with good sliding properties and good wear resistance. The material is used, for example, for slide bearings with high surface pressure and edge pressure that may occur in this context. It is also used for composite bearings in internal combustion engines.

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 %)	80 %	Melting range	780 °C
Capacity for being cold worked	not possible	Thermal stress relieving	200–450 °C
Capacity for being hot worked	not possible		

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	220	110	8	70