

Material designation	
EN	CuSn12Ni2-C-GC CC484K
UNS	–

Chemical composition*	
Cu	85 %
Sn	12 %
Ni	2 %

* Reference values in % by weight

Physical properties*		
Electrical conductivity	MS/m %IACS	6 10
Thermal conductivity	W/(m·K)	50
Thermal expansion coefficient (0–300 °C)	10 ⁻⁶ /K	17,9
Density	g/cm ³	8,9
Modulus of elasticity	GPa	100

* 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
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Material properties and typical applications

Wieland-GB1 is a very wear-resistant, tough-hard and corrosion-resistant material. It is mainly used in worm and spiral gears, fittings and pump castings, couplings, nuts subjected to high loads and in construction elements subjected to cavitation.

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	830–1010 °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 _m MPa min.	R _{p0,2} MPa min.	A % min.	HBW min.
Continuous casting	300	180	10	95