

Material designation	
EN	CuSn7Zn4Pb7-C-GC CC493K
UNS	–

Chemical composition*	
Cu	83 %
Zn	4 %
Pb	7 %
Sn	7 %

\* Reference values in % by weight

Physical properties*		
Electrical conductivity	MS/m %IACS	7.7 13
Thermal conductivity	W/(m·K)	64
Thermal expansion coefficient (0–300 °C)	10 <sup>-6</sup> /K	18.7
Density	g/cm <sup>3</sup>	8.83
Modulus of elasticity	GPa	101

\* 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-G07** is a proven standard cast copper-tin-zinc alloy for any slide bearing used in machine construction and subjected to medium stress. It has excellent sliding and emergency running properties as well as high wear resistance. Wieland-G07 can also be used in applications for which sand-cast tin bronzes are normally used and is lower priced than sand-cast tin bronzes. Some fields of application: bearings of lifting equipment, secondary bearings on machine tools, piston pin bushings for a load up to 4000 N/cm<sup>2</sup>, valve seat rings, sleeves, etc., hydraulic cylinders, slip rings, bearings of packaging machinery and electric motors, general bearings of machine and apparatus construction. The use of normal (unhardened) shaft material is allowed.

#### 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 %)	85 %	Melting range	860 – 1020 °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	260	120	12	70