

Wieland-G07

CuSn7Zn4Pb7-C-GC | Red brass

Material designation

EN CuSn7Zn4Pb7-C-GC
CC493K

UNS –

Chemical composition*

Cu 83 %

Sn 4 %

Zn 7 %

Pb 7 %

*Reference values in % by weight

Physical properties*

Electrical conductivity MS/m 7.7
%IACS 13

Thermal conductivity W/(m·K) 64

Thermal expansion coefficient (0–300 °C) 10⁻⁶/K 18.7

Density g/cm³ 8.83

Modulus of elasticity GPa 101

*Reference values at room temperature

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/cm², 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 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 85 %
(CuZn39Pb3 = 100 %)

Capacity for being cold worked not possible

Capacity for being hot worked not possible

Heat treatment

Melting range 860–1020 °C

Thermal stress relieving 250–400 °C
1–3 h

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.

Mechanical properties, reference values

	Tensile strength R _m MPa	Yield strength R _{p0.2} MPa	Elongation A %	Hardness HBW
Continuous casting	260	120	12	70

Product standards

Cast alloys EN 1982