

Wieland-GD1

CuSn5Zn5Pb2-C-GC | Cast bronze

Material designation

EN CuSn5Zn5Pb2-C-GC
CC499K

UNS –

Chemical composition*

Cu 86 %

Pb max. 3 %

Ni max. 0.6 %

Zn 6 %

Sn 4 %

*Reference values in % by weight

Physical properties*

Electrical conductivity MS/m 11.5
%IACS 20

Thermal conductivity W/(m·K) 80

Density g/cm³ 8.7

Modulus of elasticity GPa 100

*Reference values at room temperature

Material properties and typical applications

Wieland-GD1 is a cast copper-tin-zinc alloy. The material is mainly used in the fittings industry as well as for tube connectors. With the low lead and nickel content the requirements for components in drinking water installations are met.

The material is accepted for products in contact with drinking water as per 4 MS positive list.

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 70 %
(CuZn39Pb3 = 100 %)

Capacity for being cold worked not possible

Capacity for being hot worked not possible

Heat treatment

Melting range 960–1,032 °C

Thermal stress relieving 250–400 °C
2–4 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	250	110	13	65

Product standards

Cast alloys EN 1982