

Wieland-G21

CuSn10Pb10-C-GC | Lead bronze

Material designation

EN CuSn10Pb10-C-GC
CC495K

UNS –

Chemical composition*

Cu 80 %

Pb 9.5 %

Sn 10 %

*Reference values in % by weight

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.

Physical properties*

Electrical conductivity MS/m 5.9
%IACS 10

Thermal conductivity W/(m·K) 50

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

Density g/cm³ 9

Modulus of elasticity GPa 85

*Reference values at room temperature

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 80 %
(CuZn39Pb3 = 100 %)

Capacity for being cold worked not possible

Capacity for being hot worked not possible

Heat treatment

Melting range 780 °C

Thermal stress relieving 200–450 °C

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	220	110	8	70

Product standards

Cast alloys EN 1982