

Wieland-GB1

CuSn12Ni2-C-GC | Cast bronze

Material designation

EN CuSn12Ni2-C-GC
CC484K

UNS –

Chemical composition*

Cu 85 %

Sn 12 %

Ni 2 %

*Reference values in % by weight

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.

Physical properties*

Electrical conductivity MS/m 6
%IACS 10

Thermal conductivity W/(m·K) 50

Thermal expansion coefficient (0–300 °C) 10⁻⁶/K 17.9

Density g/cm³ 8.9

Modulus of elasticity GPa 100

*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 70 %
(CuZn39Pb3 = 100 %)

Capacity for being cold worked not possible

Capacity for being hot worked not possible

Heat treatment

Melting range 830–1010 °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	300	180	10	95

Product standards

Cast alloys EN 1982