Wieland-G10
CuSn10-C-GC  |  Red brass

Material designation
EN  CuSn10-C-GC
    CC480K
UNS -

Material properties and typical applications
Wieland-G10 belongs to the group of cast copper-tin alloys (bronzes) and has a relatively high elongation. It is used for parts such as fittings and water turbines.

Chemical composition*
Cu  89 %
Sn  10 %
Pb  1 %
*Reference values in % by weight

Physical properties*
Electrical conductivity  %IACS  12
Thermal conductivity  W/(m·K)  59
Thermal expansion coefficient (0–300 °C)  10⁻⁶/K  18.5
Density  g/cm³  8.8
Moduls 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 (CuZn39Pb3 = 100 %)  85 %
Capacity for being cold worked  not possible
Capacity for being hot worked  not possible
Heat treatment
Melting range  830 °C
Thermal stress relieving  250–450 °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
Continuous casting
<table>
<thead>
<tr>
<th>Tensile strength Rm</th>
<th>Yield strength Rm0,2</th>
<th>Elongation A</th>
<th>Hardness HBW</th>
</tr>
</thead>
<tbody>
<tr>
<td>280 MPa</td>
<td>170 MPa</td>
<td>10 %</td>
<td>80</td>
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</tbody>
</table>

Product standards
Cast calloys  EN 1982