Wieland-GA1
CuSn11P-C-GC  |  Cast bronze

Material designation
EN  CuSn11P-C-GC  CC481K
UNS  –

Chemical composition*
Cu  88 %
Sn  max. 1 %
Pb  11 %

Physical properties*
Electrical conductivity  MS/m  6
%IACS  10
Thermal conductivity  W/(m·K)  52
Thermal expansion coefficient (0–300 °C)  10⁻⁶/K  18.5
Density  g/cm³  8.7
Moduls of elasticity  GPa  ca. 100

*Reference values at room temperature

Material properties and typical applications
Wieland-GA1 is an alloy originating from the UK. Due to its high phosphorus content hardness and strength of this alloy are increased at the expense of elongation.

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 %)  30 %
Capacity for being cold worked  not possible
Capacity for being hot worked  not possible

Heat treatment
Melting range  830 °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

<table>
<thead>
<tr>
<th></th>
<th>Tensile strength Rm MPa</th>
<th>Yield strength Rm0,2 MPa</th>
<th>Elongation A %</th>
<th>Hardness HBW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuous casting</td>
<td>350</td>
<td>170</td>
<td>5</td>
<td>85</td>
</tr>
</tbody>
</table>

Product standards
Cast calloys  EN 1982