C103 (CW1008A) COPPER ALLOY

PRODUCT DESCRIPTION
Offering outstanding thermal conductivity and high electrical conductivity, C103 (CW1008A) copper is not susceptible to hydrogen embrittlement when heated in a reduced atmosphere. C103 copper has the highest electrical conductivity of any commercially pure copper on the market (greater than 100% IACS)

KEY FEATURES
- Outstanding thermal conductivity
- Excellent electrical conductivity, excellent formability
- Highest electrical conductivity for commercially pure copper

APPLICATIONS
- Electronic instruments, transformers & motors
- Large generators, rotor conductors
- Switchgears, vacuum engineering

CHEMICAL COMPOSITION (weight %)

<table>
<thead>
<tr>
<th>Min</th>
<th>Cu</th>
<th>Pb</th>
<th>Bi</th>
<th>Imps</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>99.95</td>
<td>0.005</td>
<td>0.001</td>
<td>0.03</td>
</tr>
<tr>
<td>Max</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PHYSICAL PROPERTIES
- Melting Point: 1083°C
- Density: 8.9 g/cm³
- Specific heat: 385J/Kg °K
- Thermal conductivity (RT): 393W/m°K
- Thermal expansion coefficient (20-200°C): 17.3 x10⁻⁶
- Electrical conductivity: 100-101.5% IACS
- Electrical Resistivity: 0.01724 ohm mm²/m

AVAILABILITY
Bar and sheet

MATERIAL SPECIFICATIONS
BS2874 / BS1433: C103 | BS EN13601: CW008A
C10200 | Cu-OF

FABRICATION PROPERTIES

<table>
<thead>
<tr>
<th>Machining</th>
<th>Cold Working</th>
<th>Electroplating</th>
<th>Soft soldering</th>
<th>Hot-Dip Tinning</th>
<th>Resistance Welding</th>
<th>Gas Shield Arc Welding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Fair</td>
<td>Good</td>
</tr>
</tbody>
</table>

Thames Stockholders
Unit SW. Woodall Road, Redburn Industrial Estate
Ponders End, Enfield, Middlesex EN3 4LQ
+44 (0)20 8805 3282
+44 (0)20 8804 8164
www.thamesstock.com
sales@thamesstock.com

© Thames Stockholders 2018