CA104 Technical Datasheet

Bronze Alloy

Typical Applications
• Valve seats
• Marine hardware
• Thrust washers
• Worm gears
• High strength fasteners
• Heavy duty bushes & bearings
• Pump components
• Engine components

Product Description
CA104 is one of the most commonly used aluminium bronzes and is known for its excellent resistance to corrosion and erosion in seawater as well as other chloride containing environments. It is the wrought version of the 10/5/5 aluminium bronze and is usually compared with BS1400 AB2 when a cast alternative is acceptable. CA104 is also known for its high strength and excellent shock and wear resistance whilst being able to retain its properties at cryogenic temperatures.

Key features
• Excellent corrosion and erosion resistance
• Good strength & toughness
• Excellent retention of properties at cryogenic temperatures
• Good resistance to shock loading
• High wear & abrasion resistance
• Good galling resistance

Availability
Round bar, hexagon, flat bar.

Cut to size capability
There are thirty power saws within the Smiths group including a fully automated magazine feed CNC rod blanking line. We can economically cut from one off blanks to the largest production run for immediate or just in time deliveries.

Corrosion Resistance
Excellent

Machinability
Good /fair.

Related material specifications
• CW307G
• BS B23
• DTD197A

Chemical Composition (weight %)

<table>
<thead>
<tr>
<th></th>
<th>Cu</th>
<th>Al</th>
<th>Ni</th>
<th>Fe</th>
<th>Mn</th>
<th>Total Impurities</th>
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<tbody>
<tr>
<td>min</td>
<td>Rem</td>
<td>8.50</td>
<td>4.00</td>
<td>4.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>max</td>
<td>Rem</td>
<td>11.00</td>
<td>5.50</td>
<td>5.00</td>
<td>0.50</td>
<td>0.50</td>
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</table>

Mechanical Properties

<table>
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<tr>
<th>Diameter</th>
<th>UTS 700 N/mm²</th>
<th>0.2% Proof Strength</th>
<th>Elongation 15%</th>
<th>Hardness</th>
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<tbody>
<tr>
<td>&lt;6-18mm incl.</td>
<td>385 N/mm²</td>
<td>15%</td>
<td>188-268 or 179-255</td>
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<tr>
<td>&gt;18-80mm incl.</td>
<td>700 N/mm²</td>
<td>15%</td>
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<tr>
<td>&gt;80-100mm</td>
<td>695 N/mm²</td>
<td>15%</td>
<td></td>
<td></td>
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<tr>
<td>&gt;100mm (4&quot;)</td>
<td>650 N/mm²</td>
<td>15%</td>
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</tbody>
</table>

Technical Assistance
Our knowledgeable staff backed up by our resident team of qualified metallurgists and engineers, will be pleased to assist further on any technical topic.

www.smithmetal.com sales@smithmetal.com

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