BSB23
Technical Datasheet

Bronze Alloy

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

Product Description
BS B23 is mainly used in aerospace engineering but is also used in the marine and chemical sectors due to its excellent resistance to corrosion and erosion in seawater as well as other chloride containing environments. It is another wrought version of the 10/5/5 aluminium bronze and is used when the commercial CA104 is deemed not fit for purpose. BS B23 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

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.

Related material specifications
- DTD197A
- CA104 (commercial)
- CW307G (commercial)

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>
</tr>
</thead>
<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>
</tr>
</tbody>
</table>

Weldability
Good.

Corrosion Resistance
Excellent

Machinability
Good / fair.

Mechanical Properties

<table>
<thead>
<tr>
<th>Diameter</th>
<th>6-18mm incl. 700 N/mm²</th>
<th>&gt;18-80mm incl. 700 N/mm²</th>
<th>&gt;80-100mm 695 N/mm²</th>
<th>&gt;100mm (4&quot;) 650 N/mm²</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTS</td>
<td>400 N/mm²</td>
<td>385 N/mm²</td>
<td>385 N/mm²</td>
<td>320 N/mm²</td>
</tr>
<tr>
<td>0.2% Proof Strength</td>
<td>385 N/mm²</td>
<td>385 N/mm²</td>
<td>385 N/mm²</td>
<td>310 N/mm²</td>
</tr>
<tr>
<td>0.1% Proof Strength</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>Elongation</td>
<td>188.268 or 179-255</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hardness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</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

All information in our data sheet is based on approximate testing and is stated to the best of our knowledge and belief. It is presented apart from contractual obligations and does not constitute any guarantee of properties or of processing or application possibilities in individual cases. Our warranties and liabilities are stated exclusively in our terms of trading. © Smiths Metal Centres 2018

Biggleswade 01767 604604
Birmingham 0121 7284940
Bristol 0117 9712800
Chelmsford 01245 466664
Gateshead 0191 4695428
Horsham 01403 261981
Leeds 0113 3075167

London 020 72412430
Manchester 0161 7948650
Nottingham 0115 9254801
Norwich 01603 789878
Redruth 01209 315512
Verwood 01202 824347
General 0845 5273331