Typical Applications

- Valve assemblies
- Marine fasteners
- Drive shafts
- Bearing cages
- Sea water pump bodies
- Bushes
- Weapons handling equipment
- Sleeve bearings

Product Description

C63200 is an American Naval alloy with improved corrosion resistance. It is quench and tempered to eliminate the possibility of corrosion and therefore is commonly used in the building of nuclear submarines as well as surface ships. It is a non-sparking alloy which can be used in explosive environments so therefore is ideal for the petrochemical, mining and weapon handling industries. It is a flexible nickel aluminium bronze that also boasts excellent wear resistance and can be easily welded.

Key features

- Superior salt water corrosion resistance
- Excellent wear & abrasion resistance
- Good strength & toughness
- Performs well at high or low temperatures
- Good resistance to shock
- Low magnetic permeability

Availability

Round bar.

Cut to size capability

There are thirty powersaws 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.

Weldability

Good / fair

Corrosion Resistance

Excellent

Machinability

Good / fair

Related material specifications

- ASTM B150

Chemical Composition (weight %)

<table>
<thead>
<tr>
<th></th>
<th>Cu</th>
<th>Al</th>
<th>Fe</th>
<th>Pb</th>
<th>Mn</th>
<th>Ni</th>
<th>Si</th>
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<tbody>
<tr>
<td>min</td>
<td>Rem</td>
<td>8.70</td>
<td>3.50</td>
<td>1.20</td>
<td>4.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>max</td>
<td>Rem</td>
<td>9.50</td>
<td>4.30</td>
<td>0.02</td>
<td>2.00</td>
<td>4.80</td>
<td>0.10</td>
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Mechanical Properties

<table>
<thead>
<tr>
<th>Form</th>
<th>Condition</th>
<th>UTS N/mm²</th>
<th>UTS ksi</th>
<th>0.5% Yield N/mm²</th>
<th>0.5% Yield ksi</th>
<th>Elongation %</th>
<th>Hardness HB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bar</td>
<td>TQ50 Up to 3&quot; (76.2mm)</td>
<td>648-792</td>
<td>94-115</td>
<td>345-496</td>
<td>50-72</td>
<td>15-25</td>
<td>190-230</td>
</tr>
<tr>
<td>Bar</td>
<td>TQ 50 &gt;3&quot;-5&quot; (&gt;76.2-127mm)</td>
<td>648-792</td>
<td>94-115</td>
<td>310-400</td>
<td>45-58</td>
<td>15-30</td>
<td>190-230</td>
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<tr>
<td>Bar</td>
<td>TQ 50 &gt;5&quot;-12&quot; (&gt;127-305mm)</td>
<td>634-751</td>
<td>92-109</td>
<td>276-379</td>
<td>40-55</td>
<td>15-25</td>
<td>180-210</td>
</tr>
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</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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