BS S145D
Technical Datasheet

Stainless Steel Bar

Typical Applications
- Aerospace components
- Military components
- High technology applications
- Automotive components
- Industrial bearings
- Precision parts

Key Features:
- High strength alloy
- Heat treated for added tensile strength
- Moderate to good corrosion resistance
- Improved strength levels over both S143 & S144
- Can be supplied solution treated or solution treated and precipitated

Product Description
S145D is a precipitation hardening stainless steel with high strength and moderate to good corrosion resistance. The alloy is identical in chemical composition to both S143 & S144 but has higher tensile strength which is achieved through heat treatment.

Chemical Composition (weight %)

<table>
<thead>
<tr>
<th>Weight (%)</th>
<th>C</th>
<th>Cr</th>
<th>Cu</th>
<th>Mn</th>
<th>Mo</th>
<th>Nb</th>
<th>Ni</th>
<th>P</th>
<th>S</th>
<th>Si</th>
<th>Fe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min</td>
<td>0.07</td>
<td>13.2</td>
<td>1.2</td>
<td>1.2</td>
<td>0.1</td>
<td>5.0</td>
<td>5.8</td>
<td>0.035</td>
<td>0.025</td>
<td>0.6</td>
<td>Bal</td>
</tr>
<tr>
<td>Max</td>
<td>0.07</td>
<td>14.7</td>
<td>2.0</td>
<td>1.0</td>
<td>0.4</td>
<td>5.8</td>
<td>5.8</td>
<td>0.035</td>
<td>0.025</td>
<td>0.6</td>
<td>Bal</td>
</tr>
</tbody>
</table>

Mechanical Properties

<table>
<thead>
<tr>
<th>S145D (solution treated)</th>
<th>S145H (solution treated &amp; precipitated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile Strength</td>
<td>Yield Strength</td>
</tr>
<tr>
<td>1270 - 1470 N/mm²</td>
<td>1030 N/mm²</td>
</tr>
<tr>
<td>375 - 429</td>
<td>363 max</td>
</tr>
</tbody>
</table>

Corrosion Resistance
Moderate

Availability
Bar

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
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