BS S154  
Technical Datasheet

Aerospace Steel Bar

Product Description
BS S154 aerospace steel bar is a 2½% Nickel-Chromium-Molybdenum steel generally available in bars and forgings with a tensile strength (Rm) of 880-1080 N/mm². It is the British aerospace equivalent to 826M31 (EN25) and is generally supplied as bright bar in the generally heat treated and cold drawn condition. With high tensile and yield strength, BS S154 finds many uses in the aerospace sector and as a general engineering alloy. The material also benefits from good toughness, good creep resistance and can be used in higher temperature applications.

Typical Applications
- Shafts and gears
- Boiler support rods
- Bolts and nuts
- Fasteners
- Mechanical parts
- Connecting rods

Availability
Bar

Key Features
- 2½% Nickel chromium molybdenum steel
- Tensile strength (Rm) of 880 - 1080 N/mm²
- High tensile and yield strength
- British aerospace equivalent to 826M31 (EN25)
- A good general engineering alloy with widespread applications

Chemical Composition (weight %)

<table>
<thead>
<tr>
<th>Weight (%)</th>
<th>C</th>
<th>Si</th>
<th>Mn</th>
<th>P</th>
<th>S</th>
<th>Cr</th>
<th>Mo</th>
<th>Ni</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min</td>
<td>0.27</td>
<td>0.15</td>
<td>0.45</td>
<td>0.50</td>
<td>0.50</td>
<td>0.45</td>
<td>2.3</td>
<td></td>
</tr>
<tr>
<td>Max</td>
<td>0.35</td>
<td>0.35</td>
<td>0.70</td>
<td>0.025</td>
<td>0.020</td>
<td>0.80</td>
<td>0.65</td>
<td>2.8</td>
</tr>
</tbody>
</table>

Mechanical Properties

| Tensile strength: | 880 - 1280 N/mm² |
| Proof Stress Rp 0.2, | 690 min |
| Elongation (%): | 12 min |
| Impacts | 40 ft lbf |
| Hardness (Brinell) | 255 - 321 HB |

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.

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