EN40B

Technical Datasheet

Applications

- Drills
- Guides
- Shafts
- Gear wheels
- Bolts and fixings

Product Description

EN40B is a chromium-molybdenum nitriding steel characterised by its suitability for nitriding which promotes high wear resistance. The material is supplied in the hardened and tempered 'T' condition, EN40B offers good toughness and good ductility. The nitriding process produces a scale free surface with minimal distortion.

Weldability

Readily weldable in the annealed supplied condition.

Key features:

- Nitriding steel
- High wear resistance
- Good toughness & ductility
- Supplied in the hardened and tempered 'T' condition
- Good shock resistance

Machinability

Readily machinable.

Related material specifications

- EN40B
- 1.7361
- 30CD12
- 722M24
- 32CrMo12

Availability

Round bar and flat bar

Chemical Composition (weight %)

<table>
<thead>
<tr>
<th></th>
<th>C</th>
<th>Si</th>
<th>Mn</th>
<th>Mo</th>
<th>Cr</th>
<th>Ni</th>
<th>P</th>
<th>S</th>
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</thead>
<tbody>
<tr>
<td>min.</td>
<td>0.20</td>
<td>0.10</td>
<td>0.40</td>
<td>0.40</td>
<td>2.90</td>
<td>0.40</td>
<td>0.05</td>
<td>0.05</td>
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<tr>
<td>max.</td>
<td>0.30</td>
<td>0.35</td>
<td>0.65</td>
<td>0.70</td>
<td>3.50</td>
<td>0.40</td>
<td>0.05</td>
<td>0.05</td>
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</tbody>
</table>

Mechanical Properties (subject to ruling section)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Tensile N/mm²</th>
<th>Yield N/mm²</th>
<th>Elongation %</th>
<th>Izod KCV</th>
<th>Hardness Brinell</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>775-925</td>
<td>585</td>
<td>15</td>
<td>50</td>
<td>223-277</td>
</tr>
<tr>
<td>T</td>
<td>850-1000</td>
<td>680</td>
<td>13</td>
<td>50</td>
<td>248-302</td>
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<tr>
<td>U</td>
<td>925-1000</td>
<td>755</td>
<td>12</td>
<td>42</td>
<td>269-331</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.

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