EN41

Applications

• Valve stems
• Connecting rods
• Clutch plates
• Shackle pins
• Die casting dies

Product Description

EN41 is a chromium aluminium molybdenum nitriding steel. The material offers high wear resistance together with toughness and ductility. EN41 is defined by its suitability for nitriding which gives the material a hard, wear resistant case. EN41 is harder wearing than EN40B and offers excellent abrasion resistance.

Weldability

Not recommended.

Key features:

• Nitriding steel
• Excellent wear & abrasion resistance
• High toughness & ductility
• Harder wearing than EN40B

Machinability

Readily machinable.

Related material specifications

<table>
<thead>
<tr>
<th>BRITISH BS 970:1991</th>
<th>905M39</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRITISH BS 970:1955</td>
<td>EN41B</td>
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</tbody>
</table>

Availability

Bar.

Chemical Composition (weight %)

<table>
<thead>
<tr>
<th></th>
<th>C</th>
<th>Si</th>
<th>Cr</th>
<th>Mo</th>
<th>Al</th>
<th>Mn</th>
<th>Ni</th>
<th>P</th>
<th>S</th>
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<tr>
<td>min.</td>
<td>0.35</td>
<td>0.10</td>
<td>1.40</td>
<td>0.10</td>
<td>0.90</td>
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<tr>
<td>max.</td>
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<td>0.45</td>
<td>1.80</td>
<td>0.25</td>
<td>1.30</td>
<td>0.65</td>
<td>0.40</td>
<td>0.05</td>
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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 J</th>
<th>Hardness Brinell</th>
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<tbody>
<tr>
<td>R</td>
<td>700-850</td>
<td>480</td>
<td>16</td>
<td>28</td>
<td>201-255</td>
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<tr>
<td>S</td>
<td>775-925</td>
<td>525</td>
<td>14</td>
<td>16</td>
<td>223-277</td>
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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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sales@smithmetal.com

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