4130 (AMS 6346)
Technical Datasheet

Chrome Molybdenum Steel Tube

Typical Applications
- Aerospace component manufacture
- Gears
- Automotive parts
- Rock crushing machinery
- Used for resistance welding
- Bearings
- Cutting tools

Product Description
4130 is a chromium-molybdenum alloy which is of the most widely used aircraft steels because of its combination of ease of fabrication, weldability and mild hardenability. It has adequate strength for many applications and when resistance to wear and abrasion is required, it may also be nitrided. 4130 is a high quality product melted under the best steel making practices for aircraft quality steels. It is vacuum degassed to meet the magnetic particle inspection standards of AMS 2301. The density of this material is typically 7.85kg/dm3.

Chemical Composition (weight %)

<table>
<thead>
<tr>
<th></th>
<th>C</th>
<th>Mn</th>
<th>Si</th>
<th>P</th>
<th>S</th>
<th>Cr</th>
<th>Ni</th>
<th>Mo</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min</td>
<td>0.28</td>
<td>0.40</td>
<td>0.15</td>
<td>(0.80)</td>
<td>0.15</td>
<td>1.10</td>
<td>0.25</td>
<td>0.25</td>
<td>0.35</td>
</tr>
<tr>
<td>Max</td>
<td>0.33</td>
<td>0.60</td>
<td>0.35</td>
<td>0.025</td>
<td>0.025</td>
<td>0.25</td>
<td>0.25</td>
<td>0.35</td>
<td></td>
</tr>
</tbody>
</table>

Mechanical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile Strength</td>
<td>862 MPa</td>
</tr>
<tr>
<td>0.2% Proof Strength</td>
<td>689 MPa</td>
</tr>
<tr>
<td>Elongation on 4D G.L.</td>
<td>17 %</td>
</tr>
</tbody>
</table>

Bars under 12.70mm hardened and tempered and cold finished.
Bars over 12.70mm hot finished and hardened and tempered or if specified hardened and tempered and cold finished.
Ground and turned or polished shall be free from decarburisation on the ground, turned or polished surfaces.

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