AMS 6346 (4130)  
Technical Datasheet

**Chromium-Molybdenum Alloy Steel Bar**

**Typical Applications**

Intended for use in the manufacture of parts and components with sections ½" thick or less at time of heat treatments which required a through-hardening steel capable of developing hardness as high as Rockwell “C” 35, and also for parts with greater thickness requiring proportionately lower hardness. It may be used for parts requiring fusion welding. Hardenability and weldability are considered equivalent to 8630 (MIL-S-6250).

**Machinability**

70% for annealed and cold drawn condition. Based on 100% for AISI 1212 steel.

**Corrosion Resistance**

Low resistance to corrosion.

**Weldability**

Good.

**Production Tolerances**

Manufacturing limits are as stated in the Table AMS 2251. For further assistance please contact our Sales Dept / Laboratory.

**Related Specifications**

- SAE 4130
- UNS G41300
- AMS 6348 (Normalised condition)

**Cut to Size Sawn blanks**

Cut to Length + 1.0mm - NIL

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**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></td>
<td>0.80</td>
<td></td>
<td>0.15</td>
<td></td>
<td></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>1.10</td>
<td>0.25</td>
<td>0.25</td>
<td>0.35</td>
</tr>
</tbody>
</table>

**Mechanical Properties (minima Heat-Treated Condition)**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile Strength (MPa)</td>
<td>862</td>
</tr>
<tr>
<td>0.2% Proof Strength (MPa)</td>
<td>689</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.

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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.

**www.smithmetal.com**

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