L102
Technical Datasheet

Aluminium Alloy

Typical Applications
- High strength structural components
- Weapons & ordinance
- Military vehicles
- Bridge building
- Structural applications
- Truck forgings
- Wheels
- Structural fittings

Product Description
L102 aluminium alloy is a structural alloy used in high strength applications. L102 is heat treatable and available in T4 condition or T4511:
- T4 - Solution heat treated and naturally aged to a substantially stable condition
- T4511 - Equivalent to T4 condition.

L102 is used in a wide variety of high strength applications across numerous industries including defence and construction.

Key features
- High mechanical strength
- Heat treatable
- Slightly higher strength than 2011 & 2017A
- Available in T6, T4 & T4511 tempers

Availability
Bar

Heat Treatable
Yes

Related material specifications
Aluminium alloy BS L102 - 2014A is covered by standard BS EN 2L102 (1971)

Chemical Composition (weight %)

<table>
<thead>
<tr>
<th></th>
<th>Al</th>
<th>Mn</th>
<th>Fe</th>
<th>Mg</th>
<th>Cr</th>
<th>Si</th>
<th>Cu</th>
<th>Ti+Zr</th>
<th>Zn</th>
<th>Others</th>
<th>Ni</th>
<th>Pb</th>
</tr>
</thead>
<tbody>
<tr>
<td>min</td>
<td>Bal</td>
<td>0.4</td>
<td>0.2</td>
<td>0.2</td>
<td>0.5</td>
<td>3.9</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.15</td>
<td>0.2</td>
<td>0.05</td>
</tr>
<tr>
<td>max</td>
<td>Bal</td>
<td>1.2</td>
<td>0.5</td>
<td>0.8</td>
<td>0.1</td>
<td>0.9</td>
<td>0.2</td>
<td>0.9</td>
<td>0.2</td>
<td>0.15</td>
<td>0.2</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Mechanical Properties

<table>
<thead>
<tr>
<th>Thickness (mm)</th>
<th>Proof Strength</th>
<th>Tensile Strength</th>
<th>Elongation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to &amp; incl. 10</td>
<td>235 Min</td>
<td>370 Min</td>
<td>11% Min</td>
</tr>
<tr>
<td>Over 10 up to &amp; incl. 20</td>
<td>260 Min</td>
<td>400 Min</td>
<td>11% Min</td>
</tr>
<tr>
<td>Over 20 up to &amp; incl. 75</td>
<td>270 Min</td>
<td>410 Min</td>
<td>14% Min</td>
</tr>
<tr>
<td>Over 75 up to &amp; incl. 150</td>
<td>260 Min</td>
<td>400 Min</td>
<td>12% Min</td>
</tr>
<tr>
<td>Over 150 up to &amp; incl. 200</td>
<td>230 Min</td>
<td>370 Min</td>
<td>8% Min</td>
</tr>
</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.

www.smithmetal.com

sales@smithmetal.com

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