Typical Applications

• Aerospace Components
• Defence Components
• High Technology Applications

Product Description

A medium strength rolled plate, solution heat-treated, artificially aged and stress relieved arriving at the ‘T651’ condition. Officially, the scope of the specification covers only thicknesses between 6 and 25mm. Of these, only 12 to 25mm thick are ultrasonically tested. However, ultrasonically tested metal up to at least 127mm thick is commonly made to chemical composition only, although mechanical properties are usually achieved as well.

General Engineering Equivalent
- 6082T651
- EN 573 / 754
- HP30TF (BS1470)

Controlled Stretched
- BE EN 4202

Surface Treatment

Anodising
- Protective - Good
- Bright - Fair
- Hard - Good / Very Good
- Colour - Good

Plating & Vitreous Enamelling
- Special pre-treatment necessary to achieve successful results

Weldability

Brazing & Soldering - Good
Oxygen - Fair
Inert Gas - Very Good
Resistance, Spot, Beam - Very Good

Machinability

Very Good

Corrosion Resistance

Resistance to Atmospheric Attack - Good

Cut Size to Size Sawn Blanks
Cut To Length and Width + / - 1.6mm

Chemical Composition (weight %)

<table>
<thead>
<tr>
<th></th>
<th>Al</th>
<th>Si</th>
<th>Fe</th>
<th>Cu</th>
<th>Mn</th>
<th>Mg</th>
<th>Cr</th>
<th>Ni</th>
<th>Zn</th>
<th>Ti</th>
<th>Pb</th>
<th>Sn</th>
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</thead>
<tbody>
<tr>
<td>Min.</td>
<td>Rem</td>
<td>0.7</td>
<td>0.4</td>
<td>0.5</td>
<td>0.4</td>
<td>0.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max.</td>
<td>Rem</td>
<td>1.3</td>
<td>0.5</td>
<td>0.1</td>
<td>1.0</td>
<td>1.2</td>
<td>0.25</td>
<td>0.1</td>
<td>0.2</td>
<td>0.05</td>
<td>0.05</td>
<td></td>
</tr>
</tbody>
</table>

Mechanical Properties (Minima)

<table>
<thead>
<tr>
<th>Size Range (mm)</th>
<th>Tensile Strength (MPa)</th>
<th>0.2% Proof Stress (MPa)</th>
<th>Elongation on 5.65xS% (%)</th>
<th>Elongation on 50mm (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 25mm</td>
<td>295</td>
<td>240</td>
<td>8</td>
<td>8</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.

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