Technical Datasheet

Aluminium Extrusion

Typical Applications
- Aerospace Components
- High Technology Applications

Product Description
A medium strength extruded bar and profile solution heat-treated, artificially aged and usually stocked controlled stretched to achieve the 'T6511' condition. Scope of specification officially ends at 200mm. However, controlled stretched bar is made, conforming to full spec up to 10"(254mm) diameter dependant on shape. Controlled stretching is not always possible on profiles.

General Engineering Equivalent
- 6082T6511
- EN 573 / 755
- HE30TF (BS1474)

BS/EN Euronorm
- BS EN 2326, 2636
- BS Pr EN 4273, 4274

AECMA Euronorm
- BSPrEN4273,4274

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

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

Machinability
Very Good.

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

Cut Size to Sawn Blanks
Cut to length in house to tolerances - Nil + 1.0mm

Corrosion Resistance
Resistance to Atmospheric Attack - Good

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>
</tr>
</thead>
<tbody>
<tr>
<td>Min.</td>
<td>Rem</td>
<td>0.7</td>
<td></td>
<td>0.4</td>
<td>0.5</td>
<td></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>1.0</td>
<td>1.2</td>
<td>0.25</td>
<td>0.1</td>
<td>0.2</td>
<td>0.2</td>
<td>0.05</td>
<td>0.05</td>
<td></td>
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</tbody>
</table>

Mechanical Properties (Minima)

<table>
<thead>
<tr>
<th>Size Range</th>
<th>Tensile Strength (MPa)</th>
<th>0.2% Proof Stress (MPa)</th>
<th>Elongation on 5.65%/50mm (%)</th>
<th>Elongation on 50mm (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(mm)</td>
<td></td>
<td>(MPa)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- to 20</td>
<td>295</td>
<td>255</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>20 to 150</td>
<td>310</td>
<td>270</td>
<td>8</td>
<td>-</td>
</tr>
<tr>
<td>150 to 200</td>
<td>280</td>
<td>240</td>
<td>5</td>
<td>-</td>
</tr>
</tbody>
</table>

NB: Figures shown above are for ‘T6' condition.

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

Production Tolerances
Manufacturing limits are as stated in U.S. For further assistance please contact our Sales Dept / Laboratory.

Chemical and mechanical properties in our data sheet are based on approximate testing and is stated to the best of our knowledge and belief. It is presented apart from contractual obligations and does not constitute any guarantee of properties or of processing or application possibilities in individual cases. Our warranties and liabilities are stated exclusively in our terms of trading. © Smiths Metal Centres 2018