6061 ALUMINIUM (inc T651 plate)

COMMERCIAL ALUMINIUM ALLOY

PRODUCT DESCRIPTION

One of the most versatile heat-treatable alloys, 6061 is an American alloy which is typically used in heavy duty structures. With medium to high strength the material offers a combination of medium to high strength with medium fatigue strength. When annealed, 6061 offers excellent formability and weldability and is readily disposed to furnace brazing. We offer 6061 in sheet, plate and extrusion form.

KEY FEATURES

- Excellent weldability and formability
- Medium to high strength alloy
- Medium fatigue strength
- Very good corrosion resistance

APPLICATIONS

- Heavy duty structures
- Shipbuilding, motorboats
- Aircraft structures
- Pylons and towers
- Rail coaches and truck bodies

CHEMICAL COMPOSITION (weight %)

<table>
<thead>
<tr>
<th></th>
<th>Mn</th>
<th>Fe</th>
<th>Mg</th>
<th>Si</th>
<th>Cu</th>
<th>Zn</th>
<th>Ti</th>
<th>Cr</th>
<th>Al</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min</td>
<td>0.15</td>
<td>0.70</td>
<td>0.40</td>
<td>0.15</td>
<td>0.04</td>
<td>Bal</td>
<td>0.04</td>
<td>0.15</td>
<td>Bal</td>
</tr>
<tr>
<td>Max</td>
<td>0.15</td>
<td>0.70</td>
<td>1.20</td>
<td>0.80</td>
<td>0.40</td>
<td>0.25</td>
<td>0.15</td>
<td>0.35</td>
<td>Bal</td>
</tr>
</tbody>
</table>

MECHANICAL PROPERTIES

- Tensile Strength: 310 MPa
- Proof Stress: 270 MPa
- Shear Strength: 190 MPa
- Elongation A50 mm: 12%
- Brinell Vickers: 100 HV

PHYSICAL PROPERTIES

- Density: 2.70 g/cm³
- Melting Point: 650 °C
- Thermal Expansion: 23.4 x10^-6 /K
- Modulus of Elasticity: 70 GPa
- Thermal Conductivity: 166 W/m.K

All information in our data sheet is 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.

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