Applications

- Shipbuilding
- Motorboats
- Aircraft structures
- Truck bodies
- Pylons & towers
- Rail coaches

Key features:

- Medium to high strength heat-treatable alloy
- Medium fatigue strength
- Very good corrosion resistance
- Typically used in heavy duty structures

Product Description

6061 aluminium is an American alloy and one of most versatile of the heat-treatable alloys. The alloy is typically used in heavy duty structures. It is a medium to high strength heat-treatable material with very good corrosion resistance and medium fatigue strength. 6061 in the annealed condition offers excellent weldability and formability and is readily disposed to furnace brazing.

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>0.80</td>
<td>0.40</td>
<td>0.15</td>
<td>0.04</td>
<td></td>
<td>0.04</td>
<td></td>
<td></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

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.

UK Service Centres:

<table>
<thead>
<tr>
<th>Centre</th>
<th>Tel No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smiths Belfast</td>
<td>02895 908 897</td>
</tr>
<tr>
<td>Smiths Biggleswade</td>
<td>01767 604 704</td>
</tr>
<tr>
<td>Smiths Birmingham</td>
<td>0121 728 4940</td>
</tr>
<tr>
<td>Smiths Bristol</td>
<td>0117 971 2800</td>
</tr>
<tr>
<td>Smiths Chelmsford</td>
<td>01245 466 664</td>
</tr>
<tr>
<td>Smiths Gateshead</td>
<td>0191 469 5428</td>
</tr>
<tr>
<td>Smiths Horsham</td>
<td>01403 261 981</td>
</tr>
</tbody>
</table>

www.smithmetal.com  | info@smithmetal.com