**2014A ALUMINIUM**

**HIGH STRENGTH ALUMINIUM ALLOY**

**PRODUCT DESCRIPTION**

Retaining its strength after heat-treatment, 2014A is classed as a high strength aluminium alloy. Supplied in the heated treated condition which is solution heat treated and artificially aged, the material is a 4 to 5% copper alloy. 2014A is used extensively in the production of high strength components, particularly in the Defence and Aerospace market. With very good machinability, the alloy is normally supplied in the T651 condition and is available in extruded bar and plate.

**KEY FEATURES**

- Good strength after heat treatment
- Can be hard anodised and easily plated
- Very good machinability

**APPLICATIONS**

- Aerospace and Defence components
- Structural applications and components
- Aerospace structures and vehicle frames

**MATERIAL SPECIFICATIONS**

- 2014A
- L168
- A92014
- AlCu4SiMg
- HE15
- BS H15
- W Nr. 3.1254 / 3.1255
- AMS 4121

**CORROSION RESISTANCE**

Poor resistance to atmospheric attack.

**CHEMICAL COMPOSITION (weight %)**

<table>
<thead>
<tr>
<th></th>
<th>Si</th>
<th>Fe</th>
<th>Cu</th>
<th>Zn</th>
<th>Mn</th>
<th>Mg</th>
<th>Ti</th>
<th>Others</th>
<th>Al</th>
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</thead>
<tbody>
<tr>
<td>Min</td>
<td>0.50</td>
<td>3.90</td>
<td>0.40</td>
<td>0.20</td>
<td>0.40</td>
<td>0.20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max</td>
<td>2.10</td>
<td>0.70</td>
<td>5.00</td>
<td>0.25</td>
<td>1.00</td>
<td>0.80</td>
<td>0.15</td>
<td>0.15</td>
<td>Bal</td>
</tr>
</tbody>
</table>

**PHYSICAL PROPERTIES**

- Melting Point: 535°C
- Thermal conductivity: 138 W/m.K
- Modulus of elasticity: 71 GPa
- Density: 2.82 kg/m³
- Thermal expansion coefficient: 23 x 10⁻⁶/K

**MECHANICAL PROPERTIES**

- Elongation A50mm: 6% min
- Tensile Strength: 415 MPa (min)
- Proof Stress: 370 MPa (min)

* Properties above for material in the T651 condition

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