3003 Aluminium
Technical Datasheet

Commerciably Pure Aluminium Alloy

Applications
- Storage tanks
- Chemical equipment
- Cooking & kitchen equipment
- Heat exchangers

Product Description
3003 aluminium alloy is a commercially pure aluminium which boasts excellent mechanical properties and is a widely used aluminium throughout industry. It is a medium strength alloy with very good resistance to atmospheric corrosion. The alloy boasts improved mechanical properties when compared with 1000 series alloys and is 20% stronger than 1100.

Corrosion Resistance
Very good

Availability
Sheet

Chemical Composition (weight %)

<table>
<thead>
<tr>
<th>Weight (%)</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
<th>Mg</th>
<th>Si</th>
<th>Zn</th>
<th>Al</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>min</td>
<td>1.10</td>
<td>0.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bal</td>
</tr>
<tr>
<td>max.</td>
<td>1.50</td>
<td>0.70</td>
<td>0.20</td>
<td>0.05</td>
<td>0.60</td>
<td>0.10</td>
<td>Bal</td>
<td>0.15</td>
</tr>
</tbody>
</table>

Mechanical Properties

| Tensile Strength | 110 MPa
| Elongation A50 mm | 25 %
| Shear Strength   | 75 MPa
| Hardness Vickers  | 29 HV
| Proof Stress      | 50 MPa

Physical Properties

| Density         | 2.73 g/cm³
| Melting Point   | 655°C
| Thermal Expansion | 23.1x10⁻⁶ /K
| Modulus of Elasticity | 69.5 GPa
| Thermal Conductivity | 190 W/m.K

The properties above are for material in the soft 'O' condition.

Key features:
- Very good corrosion resistance
- Very good workability
- 20% stronger than 1100
- Very good weldability

Related Material Specifications
- 3003 - 0 Sheet
  - AMS 4006
  - QQ-A-250/2
  - ASTM B 209
- 3003 H-14 Sheet
  - AMS 4008
  - QQ-A-250/2
  - ASTM B 209

Weldability
Very good

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
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Technical Data Sheet

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