5052 Aluminium
Technical Datasheet

Commercial Aluminium Alloy

Applications
- Pressure vessels
- Treadplate
- Marine components
- Containers
- Chemical equipment
- Architectural fascia's
- Road & name signs

Product Description
5052 aluminium is a higher strength non-heat treatable alloy. When annealed it is stronger than 1100 & 3003. The alloy benefits from a medium to high fatigue strength making it an excellent choice for use in structures which are exposed to excessive vibrations. 5052 also offers very good resistance to corrosion, especially in marine atmospheres. With good weldability and formability characteristics, the alloy can be used in a wide range of applications.

Key features:
- Good weldability
- Medium to high strength
- Very good corrosion resistance to seawater
- Medium to high fatigue strength

Related Material Specifications
- Al Mg 2.5
- Al 2.5Mg Cr

Weldability
Very good

Corrosion Resistance
Very good corrosion resistance to seawater and marine and industrial atmosphere.

Availability
Plate, 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>Cr</th>
<th>Al</th>
<th>Others</th>
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</thead>
<tbody>
<tr>
<td>min</td>
<td></td>
<td></td>
<td></td>
<td>2.20</td>
<td></td>
<td></td>
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<td>2.80</td>
<td>0.25</td>
<td>0.15</td>
<td>Bal</td>
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</tbody>
</table>

Mechanical Properties

| Tensile Strength | 210 MPa |
| Elongation A50 mm | 14% |
| Shear Strength   | 135 MPa |
| Hardness Vickers | 70 HV |
| Proof Stress     | 175 MPa |

Physical Properties

| Density       | 2.68 g/cm³ |
| Melting Point | 605°C |
| Thermal Expansion | 23.7 x10⁻⁶ /K |
| Modulus of Elasticity | 70 GPa |
| Thermal Conductivity | 138 W/mK |

The properties above are for material in the H32 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.

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