

5052 Aluminium

Technical Datasheet



Commercial Aluminium Alloy

Service. Quality. Value.

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 %)

Weight (%)	Mn	Fe	Cu	Mg	Si	Zn	Cr	Al	Others
min				2.20			0.15	Bal	
max.	0.10	0.40	0.10	2.80	0.25	0.10	0.25	Bal	0.15

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/cm ³
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.

UK Service Centres:

Smiths Belfast	02895 908 897
Smiths Biggleswade	01767 604 704
Smiths Birmingham	0121 728 4940
Smiths Bristol	0117 971 2800
Smiths Chelmsford	01245 466 664
Smiths Gateshead	0191 469 5428
Smiths Horsham	01403 261 981

Smiths Leeds	0113 307 5167
Smiths Manchester	0161 794 8650
Smiths Norwich	01603 789 878
Smiths Nottingham	0115 925 4801
Smiths Redruth	01209 315 512
Smiths Verwood	01202 824 347
Main Office	0845 527 3331

Quality & Testing:



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