

6061 Aluminium

Technical Datasheet



Service. Quality. Value.

Commercial Aluminium Alloy

Applications

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

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.

Key features:

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

Corrosion Resistance

Very good

Availability

Sheet, plate and extrusions

Chemical Composition (weight %)

	Mn	Fe	Mg	Si	Cu	Zn	Ti	Cr	Al			
min.			0.80	0.40	0.15			0.04	Bal			
max.	0.15	0.70	1.20	0.80	0.40	0.25	0.15	0.35	Bal			

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/cm ³
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:

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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