

6082 Aluminium

Technical Datasheet



Service. Quality. Value.

Commercial Aluminium Alloy

Applications

- Roof trusses
- Highly stressed applications
- Milk churns
- Bridges
- Cranes
- Ore skips

Product Description

6082 aluminium alloy has the highest strength of all the 6000 series alloys. Often referred to as a 'structural alloy', 6082 is used predominantly in highly stressed applications such as trusses, cranes and bridges. The alloy offers excellent corrosion resistance and has replaced 6061 in many applications. The extruded finish is not as smooth and therefore not as aesthetically pleasing as other alloys in the 6000 series.

Availability

Bar, plate, sheet, tube, extrusions

Key features:

- Medium strength alloy
- Highest strength of the 6000 series alloys
- Excellent corrosion resistance
- Also known as a structural alloy
- Has replaced 6061 in many applications

Related Material Specifications

- AA6082
- HE30
- DIN 3.2315
- EN AW-6082
- ISO: Al Si1MgMn
- A96082

Corrosion Resistance

Excellent

Machinability

Good

Chemical Composition (weight %)

	Mn	Fe	Mg	Si	Cu	Zn	Ti	Cr	Al			
min.	0.40		0.60	0.70					Bal			
max.	1.00	0.50	1.20	1.30	0.10	0.20	0.10	0.25	Bal			

Mechanical Properties

Tensile Strength	260 MPa
Proof Stress	170 MPa
Shear Strength	170 MPa
Elongation A50 mm	19%
Brinell Vickers	75 HV

Physical Properties

Density	2.70 g/cm ³
Melting Point	555 °C
Thermal Expansion	24 x10 ⁻⁶ /K
Modulus of Elasticity	70 GPa
Thermal Conductivity	180 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

Quality & Testing:

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
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