

# 6082 Aluminium

## Technical Datasheet



### Commercial Aluminium Alloy

Service. Quality. Value.

#### 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
- DIN 3.2315
- ISO: Al Si1MgMn
- HE30
- EN AW-6082
- 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 <sup>3</sup>
Melting Point	555 °C
Thermal Expansion	24 x10 <sup>-6</sup> /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.