



THAMES
STOCKHOLDERS

6082 Aluminium

COMMERCIAL ALUMINIUM ALLOY

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Product Overview

6082 is often referred to as a 'structural alloy' and promotes the highest strength of all 6000 series alloys.

Used predominantly in high-stressed applications such as bridges, cranes and roof structures, the alloy's extruded finish is not as smooth as others in the 6000 series, so it is not as aesthetically pleasing. In many applications, 6082 has replaced 6061 due to several factors, including excellent corrosion resistance and improved machinability.

Availability:

- Bar, plate, sheet, tube & extrusions

Applications

- Highly stressed applications
- Bridge construction, cranes, roof trusses
- Milk churns
- Ore skips

Key Features

- Highest strength alloy in 6000 series
- Excellent corrosion resistance
- Good machinability
- Replaced 6061 in many applications

* 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

* Properties as per BS EN 573-3

* Mechanical Properties

Tensile Strength	310 MPa min.
Proof Stress	260 MPa min.
Elongation A50 mm	8% min.
Brinell Hardness (typical)	95 HBW min.

* Properties as per BS EN 755-2, T6 (20-150mm)

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



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