

6061 ALUMINIUM

6061 Aluminium has good strength, good weldability and excellent corrosion resistance to atmospheric conditions. 6061 also has good corrosion resistance to salt water. Supplied solution heat treated and artificially aged to T6 temper. Used for Aircraft components, marine fittings, electrical fittings, valves and cycle parts.

Colour Code	Stocked Sizes
 Royal Blue (Bar end)	Bar Finish
	Cold Drawn

Chemical Composition		
	Min. %	Max %
Aluminium	Balance	Balance
Silicon	0.40	0.80
Manganese	0	0.15
Chromium	0.04	0.35
Iron	0	0.70
Magnesium	0.80	1.20
Zinc	0	0.25
Titanium	0	0.15

Mechanical Properties Temper T6	
Condition	T6
Tensile Strength Mpa	300
0.2% Proof Strength	241
Elongation on 5.65%	8
Brinell Hardness HB	95

*Material stocked generally in condition T
Check test certificate if critical for end use.

Forging
Heat to between 399°C to 482°C

Hot Working
Heat to between 260°C to 371°C

Cold Working
Can be cold worked if necessary but must be heat treated to develop optimum strength

Heat Treatment
Annealing
Heat to 413°C for 2-3 hours, controlled cooling at a rate of 10°C/hour to 260°C then air cool

Hardening - Solution Heat Treat

Heat to 532°C soak for 3 hours then water quench.

Hardening - Precipitation Hardening

Performed at 160°C for 18 hours then for 177°C for 8 hours and air cool

Machining

Carbide tooling is preferred. Machining in the harden (T6) is better than in the annealed state.

Welding

Good welding properties by all methods

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