

2011 ALUMINIUM

2011 Aluminium is a high strength alloy with good machinability. Supplied solution heat treated and artificially aged to T6 temper. 2011 has poor corrosion resistance therefore parts requiring protection are usually anodised. Not recommended for welding. Used for Fasteners, Fittings, Automotive trim

Colour Code	Stocked Sizes
Red (Bar end)	20 mm to 200 mm diameter.
	Bar Finish
	Cold Drawn

Chemical Composition		
	Min. %	Max. %
Aluminium	Balance	
Silicon	0	0.40
Iron	0.60	0.80
Copper	5.00	6.00
Lead	0.20	0.60
Bismuth	0.20	0.60
Zinc	0	0.30

Typical Mechanical Properties: Temper T6	
Condition	T6
Tensile Strength Mpa	395
0.2% Proof Stress Mpa	270
Elongation on 5.65%	17
Izod Impact J	
Charpy Impact J	
Brinell Hardness HB	97

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

Forging & Hot Working
Heat to 288°C to 482°C

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

Heat Treatment

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

Hardening

Heat to 524°C soaking for 3 hours then water quench

Machining

Carbide tooling is preferred. Oils should be used for heavy cutting but light cutting can be done dry. 50° top rake, 32° side rake & 10° clearance angles is recommended

Welding

Not recommended

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