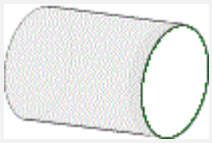
ENGINEERING STEELS + ALLOYS

7075 ALUMINIUM ALLOY

Alloy 7075 is a cold finished aluminium with the highest strength of all grades of aluminium alloys. It also has moderate corrosion resistance. Alloy 7075 can be both hard and claer coat anodized.T73 temper offers better stress corrosion cracking resistance than temper T6.Used for Gears, shafts, aircraft aprts, valve parts, low production plastic mould tools, blow moulds for plastic bottles.T6 temper 0-152.4mm diameterT73 temper 153-310mm diameterT73 temper 500mm square

Ultrasonically tested

Colour Code	**Stocked Sizes**
 White (Bar end)	38.1mm to 310 mm diameter. 500mm Sq
	Bar Finish
	Diameters - Cold DrawnSquare - Forged

Chemical Composition		
	Min. %	Max. %
Aluminium	Balance	
Chromium	0.18	2
Copper	1.2	2
Fe (Iron)	0	0.50
Magnesium	2.1	2.90
Manganese	0	0.30
Silicon	0	0.40
Titanium	0	0.20
Zinc	5.1	6.1

Minimum Mechanical Properties		
Condition	T6	T73
Tensile Mpa	756	620
Yeild.2% Mpa	695	485
Elongation %	7	11.5
Hardness HB	150	130

Check test certificate if critical for end use.

Heat Treatment

Annealing

Annealing temperature is 413°C , holding for 3 hours. Control the cooling at 10°C per hour to 260°C from the air cooled.

Aging

Precipitation strengthening can be done by heating to 121°C for 24 hours then air cooled for T6. T73 requires heating to 107°C for 8 hours at 163°C and then air cooled.

Hardening

See aging
Tempering
Not Applicable
Machining
Machinability is good in the annealed condition. Oil lubricant should be used.
Welding
Resisitance welding is the preferred method of joining. Gas welding should be avoided, and arc welding may result in degradation of corrosion resistance.
Forging
7075 may be forged in the temperature range of 370°C to 480°C. It should be solution heat treated following forging.
Hot Working
Warming the material to 120°C will assist with formability