

Aluminium alloy L113 – 6082T6 is a medium strength alloy with excellent corrosion resistance. It has the highest strength of the 6000 series alloys. Alloy 6082 is known as a structural alloy. In plate form, 6082 is the alloy most commonly used for machining. As a relatively new alloy, the higher strength of 6082 has seen it replace 6061 in many applications. The addition of a large amount of manganese controls the grain structure which in turn results in a stronger alloy.

In T6 temper, the alloy machines well.

### Chemical Composition

Element	% Present
Si	0.7-1.3
Fe	0.5 Max
Cu	0.1 Max
Mn	0.4-1.0
Cr	0.25 Max
Mg	0.5-1.2
Zn	0.2 Max
Ni	0.1 Max
Ti	0.2 Max
Sn	0.05 Max
Al	Balance

### Alloy Designations

Aluminium alloy L113 has similarities to the following standard designations and specifications: 6082

### Physical Properties

Property	Value
Density	2.70 g/cm <sup>3</sup>
Melting Point	555°C
Modulus of Elasticity	70 GPa
Electrical Conductivity	0.038x10 <sup>-6</sup> Ω.m
Thermal Conductivity	180 W/m.K
Thermal Expansion	24x10 <sup>-6</sup> /K

### Mechanical Properties

Temper	Min
Proof Stress 0.2% (MPa)	255
Tensile Strength (MPa)	295
Shear Strength (MPa)	210
Elongation A5 (%)	8
Hardness Vickers (HV)	100

### Temper

The most common temper for L113 – 6082 aluminium is:

- ◆ T6 – Solution heat treated and artificially aged

### Supplied Forms

L113-6082T6 aluminium is supplied in sheet, strip and plate. ■

*This Data is indicative only and must not be seen as a substitute for the full specification from which it is drawn. In particular, the mechanical property requirements vary widely with temper, product and product dimensions.*

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