



Aluminium Alloy - L115 T651 Plate

SPECIFICATIONS

Commercial	6082
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Aluminium alloy L115 – 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

BS L115(1971) Alloy L115	
Element	% Present
Silicon (Si)	0.7 - 1.3
Magnesium (Mg)	0.5 - 1.2
Manganese (Mn)	0.4 - 1
Iron (Fe)	0.5 max
Chromium (Cr)	0.25 max
Titanium (Ti)	0.2 max
Zinc (Zn)	0.2 max
Copper (Cu)	0.1 max
Nickel (Ni)	0.1 max
Lead (Pb)	0.05 max
Tin (Sn)	0.05 max
Aluminium (Al)	Balance

ALLOY DESIGNATIONS

Aluminium alloy L115 has similarities to the following standard designations and specifications **but may not be a direct equivalent**:
6082

TEMPER TYPES

The most common temper for L115 – 6082 aluminium is:

- T651 - Solution heat treated, stress relieved by stretching then artificially aged

SUPPLIED FORMS

L115-6082 T651 aluminium is supplied in plate.

- Plate

GENERIC PHYSICAL PROPERTIES

Property	Value
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
Electrical Resistivity	0.038 x10 ⁻⁶ Ω .m

MECHANICAL PROPERTIES

BS L115(1971) Plate Up to and inc. 25mm	
Property	Value
Tensile Strength	295 Min N/mm ²
Elongation A	8 Min %
0.2% Proof Stress	240 Min N/mm ²

These Mechanical Properties apply to Plate in the T651 temper



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CONTACT

Address:	Wilsons Ltd Nordic House Old Great North Road Huntingdon PE28 5XN
Tel:	+44 (0)1480 456421
Email:	sales@wilsonsmetals.com
Web:	www.wilsonsmetals.com

REVISION HISTORY

Datasheet Updated	09 January 2014
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