



Aluminium Alloy - L115 T651 Plate

SPECIFICATIONS

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|------------|------|
| 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



Aluminium Alloy - L115 T651 Plate

CONTACT

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REVISION HISTORY

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|-------------------|-----------------|
| Datasheet Updated | 09 January 2014 |
|-------------------|-----------------|

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