

Aluminium alloy L111 – 6082 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.

The standard specifying this grade has been superseded by BSEN 2326.

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
Ti	0.2 Max
Sn	0.05 Max
Pb	0.05 Max
Al	Balance

Specification

This alloy is now covered by BS EN 2326

Physical Properties

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

Mechanical Properties

Temper	Min / Typical
Proof Stress 0.2% (MPa)	255 Min
Tensile Strength (MPa)	295 Min
Shear Strength (MPa)	210 Typ
Elongation A5 (%)	7 Min
Hardness Vickers (HV)	100 Typ

Temper

The most common temper for L111-6082 aluminium are:

- ◆ T6
- ◆ T6510 and T6511

Supplied Forms

L111-6082T6 aluminium is supplied in Bar and Extruded Sections. ■

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.

The information is based on our present knowledge and is given in good faith. However, no liability will be accepted by the Company in respect of any action taken by any third party in reliance thereon

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