

Aluminium Alloy L115 T651 Plate



SPECIFICATIONS

Commercial	6082
------------	------

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

CONTACT

Address:	Gould Alloys Ltd Markham Lane Markham Vale Chesterfield S44 5HS United Kingdom
Tel:	+44 (0) 1246 263300
Email:	sales@gouldalloys.co.uk
Web:	www.gouldalloys.co.uk

REVISION HISTORY

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

DISCLAIMER

This Data is indicative only and as such is not to be relied upon in place of the full specification. In particular, mechanical property requirements vary widely with temper, product and product dimensions. All information is based on our present knowledge and is given in good faith. No liability will be accepted by the Company in respect of any action taken by any third party in reliance thereon.

Please note that the 'Datasheet Update' date shown above is no guarantee of accuracy or whether the datasheet is up to date.

The information provided in this datasheet has been drawn from various recognised sources, including EN Standards, recognised industry references (printed & online) and manufacturers' data. No guarantee is given that the information is from the latest issue of those sources or about the accuracy of those sources.

Material supplied by the Company may vary significantly from this data, but will conform to all relevant and applicable standards.

As the products detailed may be used for a wide variety of purposes and as the Company has no control over their use; the Company specifically excludes all conditions or warranties expressed or implied by statute or otherwise as to dimensions, properties and/or fitness for any particular purpose, whether expressed or implied.

Advice given by the Company to any third party is given for that party's assistance only and without liability on the part of the Company. All transactions are subject to the Company's current Conditions of Sale. The extent of the Company's liabilities to any customer is clearly set out in those Conditions; a copy of which is available on request.