

SPECIFICATIONS

Commercial	6082 - Obsolete
Commercial	0002 00501000

Characteristic Properties:

Very good corrosion resistance. Very good weldability (lowered strength values in the weld zone). Good machinability. Good cold formability in T4 temper after a stabilizing heat treatment. Heat treatable medium high strength construction. Alloy with a strength somewhat higher than 6061. Medium high fatigue strength. Not suitable for complex sections.

CHEMICAL COMPOSITION

BS L111(1971) Alloy L111		
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	
Tin (Sn)	0.05 max	
Lead (Pb)	0.05 max	
Aluminium (Al)	Balance	

TEMPER TYPES

The most common temper for L111-6082 aluminium are:

- T4 Solution heat treated and naturally aged to a substantially stable condition
- T5 Cooled from an elevated temperature shaping process and artificially aged
- T6 Solution heat treated and artificially aged
- T6511 Solution heat treated and stress-relieved by stretching then artificially aged with minor straightening after aging

SUPPLIED FORMS

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

• Bar

Extrusions

GENERIC PHYSICAL PROPERTIES

Property	Value	
Density	2710 g/cm ³	
Melting Point	650 °C	
Thermal Expansion	23.10 x10 ⁻⁶ /K	
Modulus of Elasticity	70000 GPa	
Thermal Conductivity	167-216 W/m.K	

MECHANICAL PROPERTIES

The Mechanical Properties values shown apply to material in the T6511 temper.

In the table, 'Dimension' means diameter or minor sectional dimension.

Dimension (mm)	Proof Strength	Tensile Strength	Elongation
Up to & incl. 20	255 Min	295 Min	7% Min
Over 20 up to & incl. 150	270 Min	310 Min	8% Min
Over 150 up to & incl. 200	240 Min	280 Min	5% Min

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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 14 January 2019

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.

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