

SPECIFICATIONS

Aerospace	L170 T6511
Commercial	7075

Aluminium alloy L170 – 7075 is a very high strength alloy used for highly stressed components requiring maximum strength with low residual stress. The standard specifying this grade has been superseded by BSEN 2127.

CHEMICAL COMPOSITION

<i>BS L170(1989)</i> Alloy L170	
Element	% Present
Zinc (Zn)	5.1 - 6.1
Magnesium (Mg)	2.1 - 2.9
Copper (Cu)	1.2 - 2
Iron (Fe)	0.5 max
Silicon (Si)	0.4 max
Manganese (Mn)	0.3 max
Chromium (Cr)	0.18 - 0.28
Titanium + Zirconium (Ti+Zr)	0.25 max
Titanium (Ti)	0.2 max
Others (Total)	0.15 max
Other (Each)	0.05 max
Aluminium (Al)	Balance

ALLOY DESIGNATIONS

Aluminium alloy L160 has similarities to the following standard designations and specifications **but may not be a direct equivalent:**
7075

TEMPER TYPES

The most common temper for L160 – 7075 aluminium is:

- T6511 - Solution heat treated and stress-relieved by stretching then artificially aged with minor straightening after aging

SUPPLIED FORMS

L160 – 7075 aluminium is supplied in Bar and Extruded Sections.

- Bar
- Extrusions

GENERIC PHYSICAL PROPERTIES

Property	Value
Density	2.81 g/cm ³
Melting Point	635 °C
Thermal Expansion	23.5 x10 ⁻⁶ /K
Modulus of Elasticity	72 GPa
Thermal Conductivity	134-160 W/m.K
Electrical Resistivity	40 % IACS

'Typical' Physical Properties are given

MECHANICAL PROPERTIES

These Mechanical properties are for Bar in the T6511 temper

Diameter (mm)	Proof Strength (Min)	Tensile Strength (Min)	Elongation % (Min)
Up to & incl. 10	480	540	4
Over 10 up to & incl. 100	520	580	4
Over 100 up to & incl. 150	490	550	4

CONTACT

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REVISION HISTORY

Datasheet Updated	09 January 2014
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