Aluminium Alloy
L170 T6511 Bar

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The standard specifying this grade has been superseded by BSEN 2127.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

BS L170(1989)
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/cm³
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

[1 OF 2] CONTINUED

CONTACT

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REVISION HISTORY

Datasheet Updated	09 January 2014

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