

SPECIFICATIONS

Commercial	7075 - OBSOLETE
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Applications:

Aircraft and military highly stressed structural components. Rolling stock for machine parts and tools (for rubber and plastics). Screws and bolts, nuts. Rivets. Nuclear applications.

Characteristic Properties:

Heat treatable very high strength alloy with a strength slightly lower than 7010. Very high fatigue strength. Joining preferably by rivets, adhesives or screws. Corrosion protection is recommended also in outdoor atmosphere.

Precautions and Warnings:

Care to be taken when selecting temper (and other thermal treatment) for balance of properties. May be clad with 7072 for better protection against stress corrosion cracking.

CHEMICAL COMPOSITION

BS 2L95(1971) Alloy L95	
Element	% Present
Zinc (Zn)	5.1 - 6.4
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)	0.1 - 0.25
Titanium + Zirconium (Ti+Zr)	0.2 max
Others (Total)	0.15 max
Other (Each)	0.05 max
Tin (Sn)	0.05 max
Nickel (Ni)	0.05 max
Lead (Pb)	0.05 max
Aluminium (Al)	Balance

ALLOY DESIGNATIONS

Aluminium alloy L95 - 7075 is covered by standard BS 2L95 (1971). BS2L95 (1971) was superseded by BS EN 2126 on 15 October 1996.

TEMPER TYPES

The most common temper for L95 - 7075 aluminium is:

- T651 - Solution heat treated, stress relieved by stretching then artificially aged

SUPPLIED FORMS

L93 - 7075 aluminium is supplied in Plate

- Plate

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 Plate in the T651 temper

Thickness (mm)	Proof Strength (Min)	Tensile Strength (Min)	Elongation % (Min)
Over 6 to & incl. 12.5	450	530	8
Over 12.5 up to & incl. 25	450	530	6
Over 25 up to & incl. 40	450	530	5
Over 40 up to & incl. 63	440	510	5
Over 63 up to & incl. 90	410	500	5

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REVISION HISTORY

Datasheet Updated	09 January 2014
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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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