

# Aluminium Alloy L93 (AMS 4029) Plate



## SPECIFICATIONS

Commercial	2014A
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### Applications:

High strength structural components for aircraft , military vehicles and bridges, weapons manufacture, structural applications.

### Characteristics:

Heat treatable alloy. High mechanical strength slightly higher than 2011 and 2017A.

## CHEMICAL COMPOSITION

BS 2L93(1971) Alloy L93	
Element	% Present
Copper (Cu)	3.9 - 5
Manganese (Mn)	0.4 - 1.2
Silicon (Si)	0.5 - 0.9
Magnesium (Mg)	0.2 - 0.8
Iron (Fe)	0.5 max
Titanium + Zirconium (Ti+Zr)	0.2 max
Zinc (Zn)	0.2 max
Nickel (Ni)	0.2 max
Chromium (Cr)	0.1 max
Tin (Sn)	0.05 max
Lead (Pb)	0.05 max
Aluminium (Al)	Balance

## ALLOY DESIGNATIONS

Aluminium alloy L93 - 2014A is covered by Standard BS EN 2100 and has similarities to the following standard designations and specifications **but may not be a direct equivalent:**

2014 / 2014A      AMS 4029

## TEMPER TYPES

The most common tempers for L93 - 2014A aluminium are:

- T4 - Solution heat treated and naturally aged to a substantially stable condition
- T6 - Solution heat treated and artificially aged
- T651 - Solution heat treated, stress relieved by stretching then artificially aged

## SUPPLIED FORMS

L93-2014A aluminium is supplied in Plate

- Plate

## GENERIC PHYSICAL PROPERTIES

Property	Value
Density	2800 g/cm <sup>3</sup>
Melting Point	640 °C
Thermal Expansion	22.8 x10 <sup>-6</sup> /K
Modulus of Elasticity	73000 GPa
Thermal Conductivity	134 - 135 W/m.K

## MECHANICAL PROPERTIES

These Mechanical Properties apply to plate in the T651 temper

Thickness (mm)	Proof strength (Min)	Tensile Strength (Min)	Elongation % (Min)
Over 6 up to & incl. 12.5	410	460	7
Over 12.5 up to & incl. 25	410	460	6
Over 25 up to & incl. 40	400	450	5
Over 40 up to & incl. 63	390	430	5
Over 63 up to & incl. 90	390	430	4
Over 90 up to & incl. 115	370	420	4
Over 115 up to & incl. 140	350	410	4

## CONTACT

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## REVISION HISTORY

Datasheet Updated	09 January 2014
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