

Aluminium

L102 T4511 Bar

Datasheet Updated
05 August 2021

SPECIFICATIONS

Commercial	2014A
Aerospace	L102 T4511

High strength aerospace aluminium alloy mainly used for structural components.

CHEMICAL COMPOSITION

BS L102 (1971)

Alloy L102

Element	% Present
Copper (Cu)	3.90 - 5.00
Chromium (Cr)	0.00 - 0.10
Iron (Fe)	0.00 - 0.50
Magnesium (Mg)	0.20 - 0.80
Manganese (Mn)	0.40 - 1.20
Nickel (Ni)	0.00 - 0.20
Lead (Pb)	0.00 - 0.05
Silicon (Si)	0.50 - 0.90
Tin (Sn)	0.00 - 0.05
Zinc (Zn)	0.00 - 0.20
Titanium + Zirconium (Ti+Zr)	0.00 - 0.20
Aluminium (Al)	Balance

ALLOY DESIGNATIONS

Aluminium alloy BS L102 - 2014A is covered by standard BS EN 2L102 (1971).

TEMPER TYPES

The most common tempers for L102 - 2014A aluminium are:

- T4511
- T4
- T6

SUPPLIED FORMS

- Bar

APPLICATIONS

- High strength structural components
- Aircraft (e.g. fittings and wheels)
- Military vehicles & bridges
- Forgings for trucks and machinery (hydraulic etc)
- Weapons manufacture
- Structural applications

CHARACTERISTICS

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

MECHANICAL PROPERTIES

BS L102 (1971)

Alloy L102 - Mechanical Properties of T4511 temper at various diameters

Property	Value
<10mm Proof Stress	235 Min
< 10mm Tensile Strength	370 Min
< 10mm Elongation	11% Min
10mm - 20mm Proof Stress	260 Min
10mm - 20mm Tensile Strength	400 Min
10mm - 20mm Elongation	11% Min
20mm - 75mm Proof Stress	270 Min
20mm - 75mm Tensile Strength	410 Min
20mm - 75mm Elongation	14% min
75mm - 150mm Proof Stress	260 Min
75mm - 150mm Tensile Strength	400 Min
75mm - 150mm Elongation	12% Min
150mm - 200mm Proof Stress	230 Min
150mm - 200mm Tensile Strength	370 Min
150mm - 200mm Elongation	8% min

DISCLAIMER

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