

SPECIFICATIONS

Commercial 2024 - Obsolete

Applications:

High strength fabricated or machined items in aircraft industries, general engineering, machinery, military equipment, truck wheels. Screw machine products. Structural applications. Rivets.

Characteristic Properties:

Heat treatable alloy. Very good machining characteristics. High strength alloy with a strength slightly higher than 2014(A) and 2017A and 2030. High fatigue strength. Suitable for welding only by resistance welding. Corrosion resistance only with cladding or other protection.

CHEMICAL COMPOSITION

BS 2L97(1971)
Alloy L97

Element	% Present
Copper (Cu)	3.8 - 4.9
Magnesium (Mg)	1.2 - 1.8
Manganese (Mn)	0.3 - 0.9
Iron (Fe)	0.5 max
Silicon (Si)	0.5 max
Titanium + Zirconium (Ti+Zr)	0.2 max
Zinc (Zn)	0.2 max
Chromium (Cr)	0.1 max
Nickel (Ni)	0.05 max
Lead (Pb)	0.05 max
Tin (Sn)	0.05 max
Aluminium (Al)	Balance

ALLOY DESIGNATIONS

Aluminium alloy L97 - 2024 is covered by standard BS 2L97 (1971)

TEMPER TYPES

The most common temper for L97 - 2024 aluminium plate is:

- T351 - Solution heat treated then stress relieved by stretching. Equivalent to T4 condition.

SUPPLIED FORMS

L97 - 2024 aluminium is supplied in the following forms:

- Plate

GENERIC PHYSICAL PROPERTIES

Property	Value
Density	2790 g/cm ³
Melting Point	640 °C
Thermal Expansion	23.10 x10 ⁻⁶ /K
Modulus of Elasticity	73000 GPa
Thermal Conductivity	121 W/m.K

MECHANICAL PROPERTIES

Thickness (mm)	Proof Strength (Min)	Tensile Strength (Min)	Elongation % (Min)
Over 6 up to & incl. 12.5	280	430	10
Over 12.5 up to & incl. 25	280	430	10
Over 25 up to & incl. 40	280	420	9
Over 40 up to & incl. 63	270	410	9
Over 63 up to & incl. 90	270	410	8
Over 90 up to & incl. 115	270	400	8
Over 115 up to & incl. 140	260	390	7

CONTACT

Address: (incorporated in the USA)
Tel: +44 (0)1371 811 642
Email: info@aerometalsalliance.com

REVISION HISTORY

Datasheet Updated 09 January 2014

DISCLAIMER

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