

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 2L98(1971)
Alloy L98

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
Zinc (Zn)	0.2 max
Titanium + Zirconium (Ti+Zr)	0.2 max
Chromium (Cr)	0.1 max
Tin (Sn)	0.05 max
Lead (Pb)	0.05 max
Nickel (Ni)	0.05 max
Aluminium (Al)	Balance

Heat Treatment

Material shall be supplied solution treated, and aged at room temperature. If agreed between the manufacturer and the purchaser, the material shall be supplied in one of the following conditions, as stated on the order.

As rolled

Annealed

Heat treatment shall be carried out as follows:

Solution treat by heating at a temperature of 495C +/- 5C and quenching in water at a temperature not exceeding 40C. Age at room temperature for not less than 48 hours.

ALLOY DESIGNATIONS

Aluminium alloy L98 - 2024 is covered by standard BS 2L98 (1971) - (now obsolete)

TEMPER TYPES

The most common temper for L98 - 2024 aluminium is:

- T4 - Solution heat treated and naturally aged to a substantially stable condition

SUPPLIED FORMS

L98 - 2024 aluminium is supplied in the following forms:

- Plate

GENERIC PHYSICAL PROPERTIES

Property	Value
Density	2.79 g/cm ³
Melting Point	640 °C
Thermal Expansion	23.10 x10 ⁻⁶ /K
Thermal Conductivity	121 W/m.K
Modulus of Elasticity	73 GPa

MECHANICAL PROPERTIES

BS 2L98(1971)
Plate
6mm to 12.5mm

Property	Value
Elongation A50 mm	10 Min %
Tensile Strength	410 Min N/mm ²
0.2% Proof Stress	260 Min N/mm ²

This specification covers plate of aluminium-copper-magnesium-manganese alloy solution treated and aged at room temperature: not controlled stretched.

The mechanical property values specified apply to tests carried out in the long transverse direction for material with nominal thickness over 6mm up to and including 12.5mm. Different values for additional nominal thicknesses and test conditions are shown in the specification

CONTACT

Address:	Gould Alloys Ltd Markham Lane Markham Vale Chesterfield S44 5HS United Kingdom
Tel:	+44 (0) 1246 263300
Email:	sales@gouldalloys.co.uk
Web:	www.gouldalloys.co.uk

REVISION HISTORY

Datasheet Updated	09 January 2014
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DISCLAIMER

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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