

2024 Aluminium

HIGH STRENGTH ALUMINIUM ALLOY

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Key Features

- Excellent toughness at moderately high strength levels
- Good strength, good fatigue resistance
- Improved fracture toughness

Product Overview

Alloy 2024 is a material specified for use in the aerospace and military sector in aerostructures, wing tension members and fuselage applications.

The alloy's suitability is primarily due to the material's good fatigue resistance. Alloy 2024 maintains strength due to improved fracture toughness and fatigue crack growth. This material is available in the annealed state in T3, T4 and T8 tempers. The material provides good machinability characteristics, although atmospheric corrosion resistance is poor.

Availability:

■ Sheet & plate

Applications

- Wing tension members
- Critical aircraft structures
- Aircraft fuselage, commercial & military aircraft

* Chemical Composition (weight, %)

	Al	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Other
Min.	Bal			3.80	0.30	1.20				
Max.	Bal	0.50	0.50	4.90	0.90	1.80	0.10	0.25	0.15	0.15

^{*} Properties as per BS EN 573-3

* Mechanical Properties

	Thicknesses Supplied	Tensile Strength (MPa)	Yield Strength (MPa)	Elongation (%)
O Sheet & Plate	0.010 - 0.499 (0.25 - 12.44)	220 max	140 max	12 min
T3 Flat Sheet	0.008 - 0.249 (0.203 - 6.32)	435 min	290 min	12 min
T351 Plate	0.250 - 4.000 (6.35 - 101.60)	435 min	290 min	12 min
T4 Coiled Sheet	0.010 - 0.125 (0.254 - 3.16)	425 min	275 min	12 min
T8 Flat Sheet	0.010 - 0.249 (0.254 - 6.32)	460 min	400 min	5 min
T851 Plate	0.250 - 1.499 (6.35 - 38.07)	460 min	400 min	5 min

^{*} Properties as per BS EN 485-2, thickness 0.4-1.5mm



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