

2024 ALUMINIUM

HIGH STRENGTH ALUMINIUM ALLOY

PRODUCT DESCRIPTION

Alloy 2024 is a material which is specified for use in the aerospace and military sector in aero structures, wing tension members and fuselage applications. This is primarily due to the material's good fatigue resistance. Alloy 2024 continues to maintain its 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 offers good machinability.



KEY FEATURES

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

APPLICATIONS

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

AVAILABILITY

Sheet and plate

CORROSION RESISTANCE

Poor resistance to atmospheric attack.

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	0.05

MECHANICAL PROPERTIES

Temper	Thickness (mm)	Tensile Strength ksi (MPa)	Yield Strength ksi (MPa)	Elongation %
0-Sheet & Plate	0.010-0.499 (0.25-12.44)	32.0 (max) (220)	14.0 (max) (96)	12
T3-Flat Sheet	0.008-0.249 (0.203-6.32)	63-64 (434-441)	42 (289)	10-15
T351-Plate*	0.250-4.000 (6.35-101.60)	64-57 (441-393)	42-41 (289-282)	12-4
T4-Coiled Sheet	0.010-0.125 (0.254-3.16)	62 (427)	40 (276)	12-15
T81-Flat Sheet	0.010-0.249 (0.254-6.32)	67 (462)	58 (400)	5
T851-Plate	0.250-1.499 (6.35-38.07)	67-66 (462-455)	58-57 (400-393)	5

* Strength decreases as thickness increases