

2024 ALUMINUM BARS

2024 is a high strength, fatigue-resistant aluminum alloy used by the motorsports and aircraft industries for structural applications. It has good machinability, and good corrosion in non-industrial atmospheres, but poor corrosion resistance in marine applications. Welding is generally not recommended. 2024 is a heat-treatable grade of aluminum, and it is sometimes used in place of 7075.

AED stocks some 2024 in bar, although sheet, plate and tube are available upon request.

2024 Chemical Analysis

Cu	Si	Fe (max)	Mn	Mg	Zn (max)	Cr	Ti (max)	Others		Al
								Each	Total	
3.80/4.90	.50	.50	.30/.90	1.20/1.80	.25	.10	.15	.05	.015	Remainder

2024 BAR

2024 bars may be available in several “tempers.” These temper designations describe the condition that material is produced to, including such criteria as heat-treating, hardening and the like. AED has tended to stock 2024 round bar in the extruded form (“-T3511”) although there has been increasing interest in the cold-finished temper, (“-T351”). Flats and squares are also common, and hex bars are also available from time to time. Most of our 2024 bars are supplied in 12-foot lengths. The best pricing is always when you order full lengths, which can be cut for economical shipping methods. AED also offers “cut-to-size” pieces.

Bar: 2024-T3511 (extruded) meets AMS-QQ-A-200/3 and AMS 4165.

Bar: 2024-T351 and 2024-T4 (both cold-finished) meet AMS-QQ-A-225/6 and AMS 4120.

Tube: 2024-T3 (drawn) meets AMS-WW-T-700/3 and AMS 4088.

2024 Bar Typical Mechanical Properties:

	2024-T351/2024-T4	2024-T3 *
Tensile Strength (psi)	68,000	70,000
Yield Strength (psi)	47,000	50,000
Elongation (% in 2")		
.063" Sheet	20	18
1/2" Round	19	-
Min. 90° Cold Bend Radius for .064" thick	3-5T	3-5T
Brinell Hardness	120	-
Ultimate Shearing Strength (psi)	41,000	40,000
Fatigue, Endurance Limit (psi)	20,000	-
Modulus of Elasticity (ksi x 1000)	10.6	10.6

* Note: 2024-T3 data shown for reference; 2024-T3511 data not available.



PRODUCT DETAILS



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Note: "Typical Mechanical Properties" have been compiled from a variety of sources. Information is deemed reliable, but it is not guaranteed. This data is provided for information only, **NOT FOR DESIGN PURPOSES.**



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