

### Key Features

- Good machinability
- Surface finish capabilities
- High strength
- Adequate workability

### Common Applications

- Aircraft fittings
- Gears and shafts
- Bolts
- Couplings
- Worm gears
- Fastening devices

### Material Description

Aluminum 2024-T351 is a heat treatable alloy known for its high strength-to-weight ratio and excellent fatigue resistance. It is composed primarily of aluminum, with copper as its main alloying element, along with small amounts of magnesium and manganese. The "T351" designation indicates that the material has been solution heat-treated and artificially aged to achieve the T351 temper, which provides high mechanical strength while retaining good formability. Aluminum 2024-T351 is commonly used in aerospace applications, including aircraft structures and components, due to its exceptional strength and fatigue resistance. Its combination of strength, machinability, and corrosion resistance makes it suitable for various high-performance applications where lightweight materials are crucial. However, it should be noted that Aluminum 2024-T351 is not as corrosion-resistant as other aluminum alloys like 5052 or 6061.

### Chemical Composition (%)

	Al	Cr	Cu	Fe	Mg	Mn	Si	Ti	Zn		
Min.	90.7		3.8		1.2	0.3					
Max.	94.7	0.10	4.9	0.50	1.8	0.9	0.5	0.15	0.25		

### Mechanical Properties

Ultimate Tensile Strength	≥ 57,300 PSI
Tensile Yield Strength	≥ 37,700 PSI
Hardness	Rockwell B75
Elongation at Break	≥ 10%

### Physical Properties

Density	0.1 lb/in <sup>3</sup> (2.78 g/cm <sup>3</sup> )
Thermal Conductivity	121W/m.K
Modulus of elasticity	10,600 KSI (73.1 GPa)
Melting Point	935 - 1,180°F (502 - 638 °C)

### Technical Assistance

Our knowledgeable staff, supported by our in-house team of expert metallurgists and engineers, is ready to assist you with any technical inquiries.

### InstaVoxel™ - On-Demand Manufacturing Expert

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