

Aluminum 2024-T351

Aluminum 2024 is heavily utilized in aircraft applications because it has good machining characteristics and higher strength than other aluminums. Its machinable properties are strong, making it essential for precision fittings and parts.

Applications

Some applications include aircraft fittings, automotive parts, brackets, gears, housing, shafts, nuts and bolts, computer parts, couplings, fuse parts, pistons, and orthopedic equipment.

Key Product Benefits

- High Corrosion Resistance
- High Strength and Hardness
- High Strength-to-Weight Ratio
- Excellent Machinability
- Electrical Conductivity

Properties

Property	Value (Imperial)	Value (Metric)
Ultimate Tensile Strength	68 ksi	469 MPa
Yield Stress	47 ksi	324 MPa
Elongation	19%	19%
Brinell Hardness	120	120
Ultimate Shearing Strength	41 ksi	283 MPa
Endurance Limit – R.R. Moore Type	20 ksi	138 MPa
Modulus of Elasticity	10.6 ksi x 10 ³	73.1 GPa
Nominal Density (68°F/20°C)	0.100 lb/in ³	2.77 Mg/m ³
Melting Range	935°F - 1180°F	502°C - 638°C
Specific Heat (212°F/100°C)	0.209 BTU/lb-°F	875 J/kg-°K
Linear Coefficient of Thermal Expansion (68°F - 212°F/20°C - 100°C)	12.7 micro in/in-°F	22.9 micro m/m-°K
Volumetric Coefficient of Thermal Expansion (68°F/20°C)	3.67 x 10 ⁻⁵ in ³ /in ³ -°F	66 x 10 ⁻⁶ m ³ /m ³ -°K
Thermal Conductivity	69 BTU/ft-hr-°F	120 W/m-°K