

Key Features

- High strength
- Good workability
- High resistance to corrosion

Common Applications

- Aircraft fittings
- Camera lens mounts
- Marines fittings and hardwares
- Electrical fittings and connectors
- Hinge pins
- Magneto parts
- Brake pistons

Material Description

Aluminum 6061-T651 is a versatile heat treatable alloy known for its excellent strength, weldability, and corrosion resistance. Composed primarily of aluminum, it contains magnesium and silicon as its main alloying elements, which contribute to its strength and formability. The "T651" designation indicates that the material has been solution heat-treated and artificially aged to achieve the T651 temper, which provides high mechanical strength, good machinability, and stress relief. Aluminum 6061-T651 is widely used in various industries, including aerospace, automotive, marine, and structural applications. It is commonly found in components such as aircraft wings, automotive parts, bicycle frames, and structural beams. Its combination of strength, formability, and corrosion resistance makes it suitable for a wide range of applications where lightweight materials with high mechanical properties are required.

Chemical Composition (%)

	Al	Cr	Cu	Fe	Mg	Mn	Si	Ti	Zn		
Min.	95.8	0.04	0.15		0.8		0.4				
Max.	98.6	0.35	0.4	0.7	1.2	0.15	0.8	0.15	0.25		

Mechanical Properties

Ultimate Tensile Strength	45,000 PSI
Tensile Yield Strength	40,000 PSI
Hardness	Rockwell B60
Elongation at Break	17%

Physical Properties

Density	0.0975 lb/in ³ (2.70 g/cm ³)
Thermal Conductivity	167W/m.K
Modulus of elasticity	10,000 KSI (68.9 GPa)
Melting Point	1,080 - 1,205°F (582 - 651.7 °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.

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InstaVoxel's quality control system is ISO-9001 certified, and all our partners hold relevant certifications.



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