

6061 aluminum is a precipitation-hardened aluminum alloy containing magnesium and silicon as its major alloying elements. It is one of the most versatile of the heat-treatable alloys, and the most common alloy of aluminum for general purpose use. 6061 is popular for its medium to high strength requirements, good toughness and excellent corrosion resistance. Our 6061-T651 aluminum tooling plate is an ideal product for many applications.

### Nominal Composition %

<b>Si</b>	Silicon – 0.40 - .80%
<b>Fe</b>	Iron – 0.70% max
<b>Cu</b>	Copper – 0.15 – 0.40%
<b>Mn</b>	Manganese – 0.8 – 1.2%
<b>Mg</b>	Magnesium – 0.8 – 1.2%
<b>Cr</b>	Chromium – 0.25% max
<b>Zn</b>	Zinc – 0.25% max
<b>Ti</b>	Titanium – 0.15% max
<b>-</b>	Others Each – 0.05% max
<b>-</b>	Others Total – 0.15% max
<b>Al</b>	Aluminum - Balance

Percent by weight, maximum unless a range is listed.

### Standard Inventory Specifications

- AMS 4027
- ASTM B209
- ASME SB 209

### Other Industry Standards

- DFARS Compliant

### Forms & Thicknesses Stocked

- Plate – 0.1875" – 6.000"

### Applications

- Transportation components - truck bodies and frames
- Structural and architectural components - steps, platforms, cover plates
- Aircraft and marine fittings
- Machine processing equipment
- Recreational products
- Typical tooling plate applications
- Heat Exchangers



**Call 1.888.282.3292**

**Or click here to view our product page and request a quote on 6061 aluminum**

### Features

- Corrosion Resistance: Good
- Wear Resistance: Good
- Stress Cracking Resistance: Excellent
- Weldability (GAS, ARC): Excellent
- Machinability: Good
- Bending: Poor

**Corrosion Resistance:** The alloy composition of 6061 aluminum includes magnesium and silicon, which enhance its corrosion resistance. These alloying elements contribute to the formation of a thin and dense oxide layer when exposed to oxygen, and it improves the overall durability of the material.

**Electrical Conductivity:** 40% of copper

## Physical Properties

Properties	Value
Density	0.0975 lb/in <sup>3</sup> (2.699 g/cm <sup>3</sup> )
Thermal Conductivity, Btu-in/hr-ft <sup>2</sup> -°F	1,160
Electrical Resistivity, Ω-cm	3.99 e -006
Specific Gravity	2.7
Melting Point (Deg F)	1,090
Modulus of Elasticity in Tension	10
Modulus of Elasticity in Torsion	3.8

## Mechanical Properties

Properties	Value
Ultimate Tensile Strength, psi	45,000
Tensile Yield Strength, psi	40,000
Elongation at Break	12%
Hardness, Rockwell B	60
Modulus of Elasticity, ksi	10,000