



Aluminum 6061

Technical Data

Description:

Material name	Aluminum	Alternative names	3.3211 65028 AlMg1SiCu
Code	Aluminum 6061-T6	Process compatibility	CNC machining
Basic status code	H/O/H/W/T	Application	Aluminum has a wide range of applications from prototyping to automotive to aerospace.
Advantages	Good strength-to-weight ratio, Good mechanical properties	Disadvantages	More expensive than steel in general, more difficult to weld, weaker overall than other structural metals
Tolerances	0.005	Max Part Size	The maximum size of the part is determined by the available machines and the complexity of the part.

Chemical Component:

Elements	Cu	Mn	Mg	Zn	Cr	Ti	Si	Fe	Al
Standard(%)	0.15~0.4	0.15	0.8~1.2	0.25	0.04~0.35	0.15	0.4~0.8	≤0.7	余量

Mechanical Properties:

Items	Ultimate tensile strength	Yield strength	Young's modulus (modulus of elasticity)	Elongation at break	Density	Hardness (Brinell)
Standard	≥ 205 MPa	≥ 110 MPa	68.9 Gpa	25%	2.75g/cm ³	120

Physical Properties :

Corrosion resistance	High	Weldability	High
Magnetism	Non-magnetic		

Thermal Properties :

Maximum service temperature	130 - 150 °C	Thermal expansion coefficient	22,7 - 23,9 $10^{-6}/^{\circ}\text{C}$	Thermal conductivity	152 - 169 W/(m · °C)
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Electrical properties

Electrical resistivity	3.9 - 4.1 $\mu\Omega \cdot \text{cm}$
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Post Treatments

Post-Processing	Annealing & Cold working	Anodizing compatibility	Suitable	
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