

Aluminum 6061 Datasheet



Overview

Aluminum 6061 is one of the most commonly used metal alloys in the industry, known for its lightweight yet durable properties. With its metallic appearance, this alloy is ideal for a wide range of functional parts and prototypes.

As-printed Part's Tolerance: $\pm 300\mu\text{m}$ or 0.3%

Maximum Printing Size: 420*420*450mm

Properties

Dense Properties	Metric	Method
Density	2.8 g/cm ³	WGE-Prod-067EN
Relative Density	99.0%	WGE-Prod-067EN
Mechanical Properties	Metric	Method
Tensile Strength	290MPa	DIN EN ISO 6892-1:2009
Yield Strength	240MPa	DIN EN ISO 6892-1:2009
Elongation at Break	10%	DIN EN ISO 6892-1:2009
Elastic Modulus	70GPa	DIN EN ISO 6892-1:2009
Surface Properties	Metric	Method
Roughness Ra	16 µm	ISO 4287 / AITM 1-00070
Roughness Rz	70 µm	ISO 4287 / AITM 1-00070

Pros

6061 aluminum offers exceptional material properties. It provides excellent electrical conductivity and corrosion resistance, making it ideal for engineering and design validation, as well as mass production of intricate metal components.

Cons

The surface of products printed with powdered metal materials may exhibit pits and wider tolerances, often necessitating post-processing steps to improve the finish.

Applications

Automotive parts and supplies	Industrial Display Panels	Intercoolers
Consumer Electronic Products	Aerospace Mechanical Parts	Frames
Jigs and Fixtures	Enclosures and Housings	Bicycle Components