

Key Features

- Good corrosion resistance
- Excellent strength-to-weight ratio
- Excellent malleability
- Excellent thermal conductivity

Common Applications

- Functional prototypes
- User-specific products or spare parts
- Motorsport applications

Material Description

AlSi10Mg is an aluminum alloy that contains approximately 10% silicon and 0.3% magnesium. This material is commonly used in additive manufacturing (3D printing) and casting processes due to its excellent casting properties, good corrosion resistance, and high thermal conductivity. AlSi10Mg is known for its good mechanical properties, including high strength and hardness, as well as good wear resistance. It is often used in applications such as aerospace, automotive, and general engineering for parts that require a combination of lightweight and high strength.

Chemical Composition (%)

	Al	Cu	Fe	Pb	Mg	Mn	Ni	Si	Sn	Ti	Zn
Min.	87.15				0.20			9.0			
Max.	90.8	0.10	0.55	0.050	0.45	0.35	0.050	11	0.050	0.15	0.10

Mechanical Properties

Flexural Modulus	180 MPa
Tensile Modulus	300 MPa
Hardness	Rockwell B67
Elongation at Break	8%

Physical Properties

Density	0.0968 lb/in ³ (2.68 g/cm ³)
Modulus of Elasticity	70 GPa
Melting Point	1,030 - 1,100°F (557 - 596 °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.

InstaVoxel™ – On-Demand Manufacturing Expert

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



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