



AlSi10Mg

Aluminum-based Alloy

Aluminum alloy is the most widely used class of non-ferrous metal structure materials in the industry. The models printed has low density but relatively high strength which is close to or beyond high-quality steel and good plastic.



Advantage

- > Build parts offers excellent mechanical properties, such as hardness and tensile strength
- > Outstanding corrosion resistance
- > Good thermal and electrical conductivity
- > High dynamic toughness

Ideal Applications

- > Functional parts in automotive industries
- > Light weight structural geometries for aerospace
- > Thermal applications such as heat exchangers
- > Robotics & engineering

Powder composition / percent by mass

Si	Fe	Cu	Mn	Mg	Ni	Zn	Pb	Sn	Ti	Al
9.0–11.0	0.55	0.05	0.45	0.2–0.45	0.05	0.1	0.05	0.05	0.15	Balance

Technical Datasheet

General Properties	Density ISO3369	≥2.65 g/cm ³
Mechanical Properties (As built)	Tensile Strength ISO6892-1	≥430 MPa
	Yield Strength ISO6892-1	≥250 MPa
	Elongation after Fracture ISO6892-1	≥5 %
	Vickers hardness ISO6507-1	≥120 HV5/15
	Surface roughness Ra Z	6-10μm
Mechanical Properties (Heat treated)	Tensile Strength ISO6892-1	≥300 MPa
	Yield Strength ISO6892-1	≥200 MPa
	Elongation after Fracture ISO6892-1	≥10 %
	Vickers hardness ISO6507-1	≥70 HV5/15
	HRB	70HRB

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