



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

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