

DIRECT METAL LASER SINTERING

Aluminum AlSi10Mg

Product Specifications



Product Description

Aluminum (AlSi10Mg) is comparable to a 300 series alloy that is used in casting processes. It has good strength-to-weight ratio, high temperature and corrosion resistance, and good fatigue, creep and rupture strength. AlSi10Mg also exhibits enhanced thermal and electrical conductivity properties among 3D printing materials. Final parts built in AlSi10Mg receive stress relief application.

Applications

Due to its high strength-to-weight ratio, AlSi10Mg is a good choice among casting materials for automotive and aerospace applications, notably gearboxes, housings and brackets that are subject to high loading.



Key Product Benefits

- ▶ High stiffness and strength relative to weight
- ▶ Thermal and electrical conductivity

Properties

Resolution	Condition	Ultimate Tensile Strength (ksi)	Yield Stress (ksi)	Elongation (%)	Hardness
15 μ m	Stress Relieved	45	31	8	46 HRB
30 μ m	Stress Relieved	50	33	8	59 HRB
40 μ m	Stress Relieved	43	27	10	50 HRB