Stratasys
DIRECT MANUFACTURING

DMLS MATERIAL SPECIFICATIONS

Aluminum AlSi10Mg

Highlights

- Low weight
- Good thermal properties
- Good strength and hardness
- Fast building
- Excellent machinability

Applications

- Thin walls
- Complex geometries
- Lower cost prototypes
- Aerospace
- Automotive

Mechanical Properties

Property	English	Metric	English	Metric
	Stress Relieved - 35 C Platform	Stress Relieved - 35 C Platform	HIP + T6 Heat Treat	HIP + T6 Heat Treat
Ultimate Tensile Strength	55 ksi	379MPa	41 ksi	281 MPa
0.2% Yield Strength	34 ksi	232 MPa	32 ksi	221 MPa
Elongation	6.9%	6.9%	14.1%	14.1%
Reduction of Area	10.2%	10.2%	20.7%	20.7%
Modulus of Elasticity	9.91 Msi	68.3 GPa	10.29 Msi	71.0 GPa
Harndess, Rockwell B	64	64	-	-

Aluminum AlSi10Mg Composition

Element	Typical Composition
Aluminum (Al)	balance
Copper (Cu)	≥ 0.05
Iron (Fe)	≥ 0.25
Magnesium (Mg)	0.25 - 0.45
Manganese (Mn)	≥ 0.10
Nickel (Ni)	≥ 0.05
Polybutylene (Pb)	≥ 0.02
Silicon (Si)	9.0 - 11.0
Stannum (Sn)	≥ 0.02
Titanium (Ti)	≥ 0.15
Zinc (Zn)	≥ 0.1

*Chemical analysis for specific lots available upon request.
The material properties provided herein are for reference purposes only. Actual values may vary significantly as they are dramatically affected by part geometry and process parameters. Material specifications are subject to change without notice.

(888) 311-1017 | StratasysDirect.com | 28309 Avenue Crocker, Valencia CA 91355