



Aluminum AlSi10Mg

DIRECT METAL LASER MELTING MATERIAL SPECIFICATIONS

Highlights

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

Applications

- Thin walls
- Complex geometries
- Lower cost prototypes
- Aerospace and automotive

TYPICAL PHYSICAL PROPERTIES

MECHANICAL PROPERTIES	ENGLISH	METRIC	ENGLISH	METRIC
	STRESS RELIEVED - 35 C PLATFORM		HIP + T6 HEAT TREAT	
Ultimate Tensile Strength	55 ksi	379 MPa	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
Hardness, Rockwell B	64	64	-	-

ALUMINUM ALSI10MG COMPOSITION

ELEMENT	TYPICAL PERCENTAGES
Aluminum (Al)	balance
Copper (Cu)	≤ 0.05
Iron (Fe)	≤ 0.55
Magnesium (Mg)	0.2 - 0.45
Manganese (Mn)	≤ 0.45
Silicon (Si)	9.0 - 11.0
Titanium (Ti)	≤ 0.15
Zinc (Zn)	≤ 0.10

The information presented represents typical values intended for reference and comparison purposes only. It should not be used for design specifications or quality control purposes. End-use material performance can be impacted (+/-) by, but not limited to, part design, end-use conditions, test conditions, color etc. Actual values will vary with build conditions. Product specifications are subject to change without notice. *Chemical analysis for specific lots available upon request.

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