# ALUMINUM ALLOY ALSI10MG

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**OLA Product Name: Aluminum Alloy AlSi10Mg**

**Color: Natural (Metallic Gray)**

**Process: SLM**

## MATERIAL SUMMARY

Tolerance: ±200μm or ±0.2%

Lead Time: 48 hours (for parts under 100mm; contact for larger builds)

Maximum Printing Size:427mm × 527mm × 460mm

Notes:

## EVALUATION

- **Advantages**
  ① Cost-effective for complex part production.
  ② Higher strength than traditional cast aluminum.
  ③ Fast lead time for parts ≤100mm (as fast as 48hours).
  ④ Supports large-format printing (up to 427×527×460mm); contact sales for lead time.

- **Disadvantages**
  ① Relatively low elongation in as-printed condition.
  ② Maximum heat resistance limited to 200°C.
  ③ Slight surface porosity and layer texture (Ra ~10μm).

## KEY FEATURES

AlSi10Mg is a lightweight aluminum alloy with excellent strength-to-weight ratio, good thermal conductivity, and reliable mechanical properties. Known for its low density and great cost-effectiveness, this alloy is ideal for complex geometries, heat-resistant parts, and functional prototypes in aerospace, automotive, and electronics.

## MATERIAL PROPERTIES

- Surface Roughness (Sandblasted): ≥7μm
- Hardness (As-Printed): HRB 69 ± 3
- Hardness (After Heat Treatment): HRB 63 ± 3
- Tensile Strength (As-Printed): 440 ± 50 MPa
- Tensile Strength (After Heat Treatment): 320 ± 50 MPa
- Yield Strength (As-Printed): 240 ± 50 MPa
- Yield Strength (After Heat Treatment): 210 ± 50 MPa
- Elongation (As-Printed): 6% ± 3
- Elongation (After Heat Treatment): 8% ± 3

## APPLICATION SCENARIOS

- Lightweight heat exchangers, housings, electronic components, automotive and aerospace structures

## POST-PROCESSING OPTIONS

- Thread tapping
- Sand-blasting