

OLA Product Name: OLA PA11Pro

Color: Gray-black

Process: SLS

MATERIAL SUMMARY

Tolerance: $\pm 300\mu\text{m}$ or $\pm 0.3\%$

Lead Time: 4 days

Maximum Printing Size: 299mm × 199mm × 283mm

Notes:



EVALUATION

- **Advantages:**
 - ✓ Outstanding ductility and impact resistance
 - ✓ More suitable for mass production than PA12
 - ✓ 100% bio-based and sustainable
 - ✓ Excellent for producing durable, complex functional parts
- **Limitations:**
 - ✗ Slight color inconsistency may appear on different part surfaces: top surfaces tend to be darker than sides. This can be addressed through optional black dyeing service
 - ✗ While PA11Pro is bio-based, post-processing (e.g., painting or dyeing) may affect its biocompatibility compliance

KEY FEATURES

OLA PA11Pro is a high-performance nylon material made from castor oil, offering 100% bio-based environmental benefits. It provides exceptional ductility and impact resistance, making it ideal for mass production of strong, detailed parts across various industrial applications. Compared to PA12, PA11Pro is better suited for parts requiring flexibility and durability under dynamic stress.

APPLICATION SCENARIOS

- **Automotive parts:** interior components, bumper structures, living hinges
- **Medical & Dental:** orthodontic models (e.g., aligners – untreated surface only)
- **Functional Prototypes:** robust enclosures, load-bearing parts

MATERIAL PROPERTIES

Heat Deflection Temperature: 185°C (0.45MPa), 47°C (1.82MPa)

Tensile Modulus (ASTM D638): 1.53GPa

Tensile Strength (ASTM D638): 51MPa

Elongation at Break (ASTM D638): 30%

Flexural Modulus (ASTM D790): 1.34GPa

● **Flexural Strength (ASTM D790):** 51MPa

● **Notched Izod Impact Strength (ASTM D256):** 7.4J/m

POST-PROCESSING OPTIONS

- Thread tapping
- Vapor Smoothing (Chemical Polishing)
- Black Dyeing