MJF Nylon 12(Raw Grey)

INDUSTRIAL GRADE MATERIALS FOR MJF 3D PRINTING

MATERIAL NAME
MJF Nylon 12(Raw Grey)

COLOR
Raw Grey

PROCESS
MJF

PRODUCT DESCRIPTION

This nylon material has excellent mechanical properties, with strength and density exceeding that of parts produced on other powder bed printing technologies. The strength makes it an excellent choice for functional parts, such as drone parts, RC cars, mechanical fixtures, camera mounts and phone cases. The surface is semi-glossy and somewhat granular, also making it a great material for jewelry, home decor, toys and games. HP Nylon Plastic can be thought of as a general use plastic that has a wide range of applications.

TYPICAL APPLICATIONS

- Drone parts
- Mechanical fixtures
- Phone cases
- RC cars
- Camera mounts

PRODUCT SAFETY

Most nylon products are biocompatible materials. There is no problem with normal skin contact. Only a small number of people will experience slight skin irritation.

PRODUCT DELIVERY & WAREHOUSING

- **MOISTURE CONTROL**
  Nylon is highly hygroscopic. Store in a dry environment with humidity below 50% to prevent dimensional swelling and performance degradation.
  Use sealed packaging with desiccants or vacuum storage.

- **TEMPERATURE CONTROL**
  Keep storage temperature between 5°C and 35°C. Avoid high temperatures (>60°C) that may cause deformation and low temperatures (<0°C) that may induce brittleness.

- **UV PROTECTION**
  Avoid exposure to UV light to prevent material aging, such as yellowing, brittleness, or loss of mechanical properties.

- **PHYSICAL PROTECTION**
  Prevent heavy stacking or impacts to avoid deformation or cracking.

PROPERTIES OF PRINTED MATERIAL

Properties	Test Method	Value
Hardness	/	/
Flexural modulus (Mpa)	ASTM D638	XY: 1730 MPa Z: 1730 MPa
Flexural strength (Mpa)	ASTM D790	XY: 65 MPa Z: 70 MPa
Tensile modulus (Mpa)	ASTM D638	XY: 1700 MPa Z: 1800 MPa
Tensile strength (Mpa)	ASTM D638	XY: 48 MPa Z: 48 MPa
Elongation at break	ASTM D638	XY: 20% Z: 15%
Poisson's Ratio	/	/
Impact strength notched Izod (J/m)	ASTM D256A	(3.2mm，23℃), XYZ: 3.5 KJ/m²
Heat deflection temperature (°C)	ASTM D648A	HDT @0.45 MPa (66psi): 175℃ (XYZ) HDT @1.82 MPa (264psi): 95℃ (XY); 106℃ (Z)
Glass transition,Tg (°C)	/	/
Coefficient of themal expension(/°C)	/	/
Density (g/cm³)	ASTM D1895 ASTM D792	Apparent density of powders: 0.425 g/cm³ Workpiece density: 1.01 g/cm³

Tips: Want to explore a wider range of materials? Check out *https://www.unionfab.com/materials*