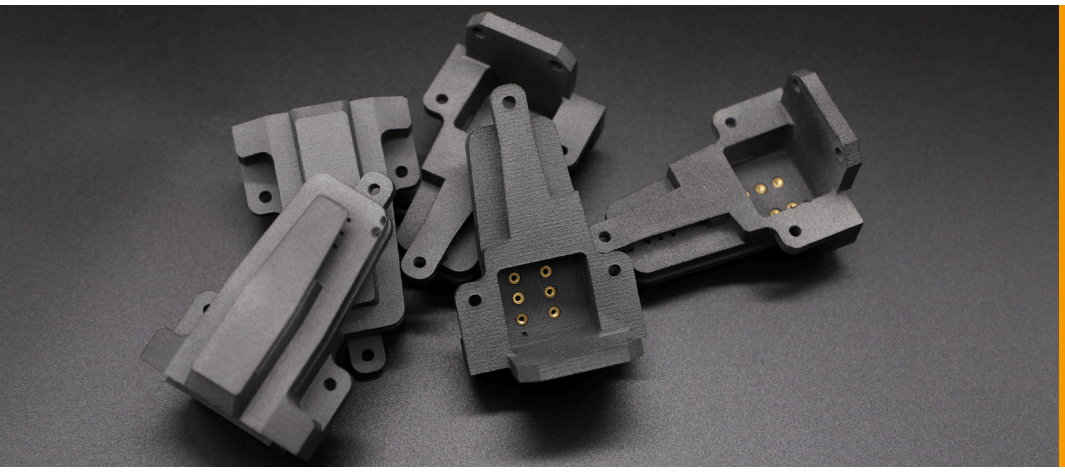
Nylon 12 Pro(Black)

INDUSTRIAL GRADE MATERIALS FOR SLS 3D PRINTING



MATERIAL NAME
Nylon 12 Pro(Black)

COLOR
Black

PROCESS
SLS

PRODUCT DESCRIPTION

Nylon 12 Pro(Black) is improved based on Evonik's basic materials, match with the update printing parameters. Compared with Nylon 12(White), it has better details, better toughness, small holes and small details (0.4-0.6mm) can also be printed well. It maintains stable dimensional accuracy. Recommended for small batch printing, available in raw black color, with the option to paint in various colors.

TYPICAL APPLICATIONS

- Complex assembly
- Clip parts
- Drone parts
- Functional shell
- Cultural and creative goods

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 D790	1900 MPa
Flexural strength (Mpa)	ASTM D790	60 MPa
Tensile modulus (Mpa)	ASTM D638	2000 MPa
Tensile strength (Mpa)	ASTM D638	50 MPa
Elongation at break	ASTM D638	8~15%
Poisson's Ratio	/	/
Impact strength notched Izod (J/m)	ASTM D256	21 J/m
Heat deflection temperature (°C)	ASTM D648	HDT @0.45 MPa: 180.85℃ HDT @1.82 MPa: 115.4℃
Glass transition,Tg (°C)	/	/
Coefficient of themal expension(/°C)	/	/
Density (g/cm³)	DIN 53466	0.95 g/cm³

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