Nylon 11(Black)

INDUSTRIAL GRADE MATERIALS FOR SLS 3D PRINTING

MATERIAL NAME
Nylon 11(Black)

COLOR
Black

PROCESS
SLS

PRODUCT DESCRIPTION

Nylon 11(Black) is a high-performance material known for its exceptional impact resistance, excellent toughness, low water absorption, and good oil resistance. These properties make it ideal for demanding applications such as fuel pipelines, retaining rings, snap-fit components, prosthetics, and protective braces, ensuring durability and stability in various environments.

TYPICAL APPLICATIONS

- Fuel pipeline
- Snap-fit component
- Brace
- Retaining ring
- Prosthesis

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	1500 MPa
Flexural strength (Mpa)	ASTM D790	49 MPa
Tensile modulus (Mpa)	ASTM D638	1600 MPa
Tensile strength (Mpa)	ASTM D638	46 MPa
Elongation at break	ASTM D638	48%
Poisson's Ratio	/	/
Impact strength notched Izod (J/m)	ASTM D256	7 J/m
Heat deflection temperature (°C)	ASTM D648	HDT @0.45 MPa: 170.5℃ HDT @1.82 MPa: 85.5℃
Glass transition,Tg (°C)	/	/
Coefficient of themal expension(/°C)	/	/
Density (g/cm³)	DIN 53466	0.99g/cm³

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