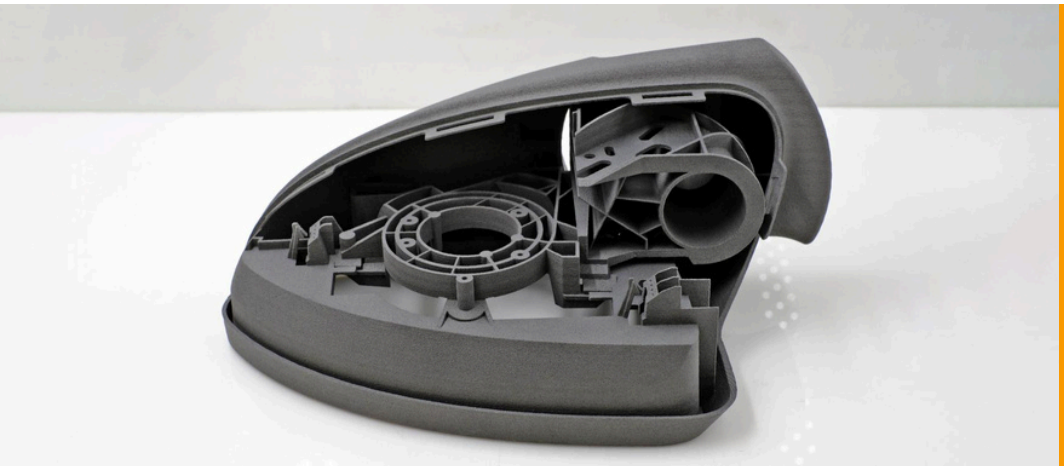
Nylon 12 Glass-filled(Black)

INDUSTRIAL GRADE MATERIALS FOR SLS 3D PRINTING



MATERIAL NAME
Nylon 12 Glass-filled(Black)

COLOR
Black

PROCESS
SLS

PRODUCT DESCRIPTION

The surface of Nylon 12 Glass-filled(Black) is black and slightly granular and porous. Nylon Glass-filled is more durable and resistant than Nylon PA12. It gives you great freedom in your designs – allowing for both complex and inclosed volumes. The material is great for technical parts that need resistance and loads. The surface is not as accurate as polyamide 12 but it will fit the requirements of technical parts.

TYPICAL APPLICATIONS

- Functional prototypes and end products
- Moving and assembled parts
- Functional prototyping and testing
- Complex designs with intricate details
- Form and fit testing

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)	GB/T 9341-2008	2100 MPa
Flexural strength (Mpa)	GB/T 9341-2008	60 MPa
Tensile modulus (Mpa)	GB/T 1040.2-2006	2600 MPa
Tensile strength (Mpa)	GB/T 1040.2-2006	45 MPa
Elongation at break	GB/T 1040.2-2006	6.7%
Poisson's Ratio	/	/
Impact strength notched Izod (J/m)	GB/T 1843-2008	6.1 KJ/m²
Heat deflection temperature (°C)	GB/T1634.2-2004	HDT @0.45 MPa: 153.1℃ HDT @1.82 MPa: 69℃
Glass transition,Tg (°C)	/	/
Coefficient of themal expension(/°C)	/	/
Density (g/cm³)	/	Apparent density of powders: 0.68 g/cm³ Workpiece density: 1.31 g/cm³

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