

Nylon 6 Glass-filled(Black)

INDUSTRIAL GRADE MATERIALS FOR SLS 3D PRINTING



MATERIAL NAME

Nylon 6 Glass-filled(Black)

COLOR

Black

PROCESS

SLS

PRODUCT DESCRIPTION

PA6GF is a glass fiber reinforced PA6 (Nylon 6) powder material. PA6GF has excellent rigidity, heat resistance, and corrosion resistance. It's suitable for functional parts verification, small-scale production, replacing CNC and Injection molding parts, especially suitable for applications in industries such as automobiles and electronics.

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 | 6174 MPa |
| Flexural strength (Mpa) | GB/T 9341-2008 | 127 MPa |
| Tensile modulus (Mpa) | GB/T 1040.2-2006 | 6481 MPa |
| Tensile strength (Mpa) | GB/T 1040.2-2006 | 72 MPa |
| Elongation at break | GB/T 1040.2-2006 | 1.3% |
| Poisson's Ratio | / | / |
| Impact strength notched Izod (J/m) | GB/T 1843-2008 | 4.1 KJ/m ² |
| Heat deflection temperature (°C) | GB/T1634.2-2004 | HDT @0.45 MPa: 218°C HDT @1.82 MPa: 201°C |
| Glass transition, Tg (°C) | / | / |
| Coefficient of thermal expansion(/°C) | / | / |
| Density (g/cm ³) | / | Apparent density of powders: 0.62 g/cm ³ Workpiece density: 1.41 g/cm ³ |

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



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