

TECHNICAL DATA SHEET

HDglass

Date of issue: 09-03-2016 / Date of update: 16-12-2024



Product specifications

HD in HDglass stands for "Heavy Duty". It has outstanding properties with respect to strength, toughness and temperature resistance. Next to this, it is a high gloss and ultra-transparent 3D printer filament.

HDglass is a high performance filament based on a unique PETG blend. HDglass is amorphous filament developed to have a perfect 3D printing flowing behavior. This is achieved by its optimal thermal stability.

Important key features

- Extremely transparent and high gloss.
- 90% optical light transmittance with only 1% of haze.
- Food contact compliant.
- Good UV resistance.
- Heat resistant up to 70°C.

Suitable applications

- Signage.
- Lighting applications.
- 3D printing end-use parts.
- 3D printing manufacturing aids.
- Small-scale production.

Material properties

Specific gravity

Typical value

1.27 g/cm³

Test Method

ASTM D792

Mechanical properties

Impact strength

129 J/m

ASTM D256

Tensile modulus

1960 Mpa

ASTM D638

Tensile strength at break

50 MPa

ASTM D638

Tensile stress at yield

29 MPa

ASTM D638

Tensile elongation at yield

4.4%

ASTM D638

Tensile elongation at break

60%

ASTM D638

Flexural strength

70 MPa

ASTM D790

Flexural modulus

2150 MPa

ASTM D790

Notched Izod Impact

16 J/m

ASTM D256

Rockwell hardness (R scale)

108

Thermal properties

HDT

70°C

ASTM E2092

Printing guidelines

Print speed

25 - 300 mm/s

Nozzle temperature

235 - 275 °C

Heat bed temperature

70 - 90 °C

Fan speed

0 - 60%

Enclosure

Recommended

Dry box

Recommended

Drying

Recommended (45 - 50 °C / 12h)

High speed printing

This filament is compatible high speed printers and high printing speeds. Please be advised that the nozzle temperature and fan speed need to be increased when printing at high speeds.

Storage and handling

Filament should be stored at room temperature in a dry and dark place with humidity below 15%. Recommended storage temperature is ca. 18-25°C (64.4 - 77.0°F). Keep out of moisture, sunlight and direct heat. When stored properly, product has a shelf life of 24 months. To obtain the best parameters of the printed object, it is recommended to dry the material prior to usage and to 3D print it directly from a dry box.



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Product export information

| HS Code | Description | Origin |
|----------|------------------------------|----------------|
| 39169090 | Monofilament for 3D printing | European Union |

Disclaimer

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