

# TECHNICAL DATA SHEET

Kratos PC

Date of issue: 15-08-2024 / Date of update: 15-08-2024



## Product specifications

Kratos PC is the next generation in PC filament. It uses the same low warp technology as our TitanX and ApolloX filaments. This means low shrinkage plus increased bed- and layer adhesion. In short, Kratos PC is the easiest to 3D print PC filament. Its improved flow rate enables this PC filament to 3D print at high speeds.

Kratos PC is a true engineering filament. It combines excellent mechanical and thermal properties. Kratos PC is ideal for printing durable parts with a high impact strength. It 3D prints detailed parts with a high dimensional accuracy. Your printed parts will be heat-resistant up to 150°C.

## Important key features

- Durable with a high impact- and tensile strength.
- High resistance to dynamic loads.
- Vicat softening temperature of 150°C
- HDT B of 139°C.
- High speed printing compatible up to 200 mm/s.

## Suitable applications

- 3D printing automotive parts.
- Functional prototyping.
- 3D printing end-use parts.
- Small-scale production.
- Manufacturing electronic components.

## Material properties

Specific Gravity

## Typical value

1.20 g/cm<sup>3</sup>

## Test Method

ASTM D 792

## Mechanical properties

Tensile strength at yield (50mm/min)

630 kg/cm<sup>2</sup>

ASTM D 638

Tensile elongation at break (50mm/min)

>100%

ASTM D 638

Flexural Strength (15mm/min)

920 kg/cm<sup>2</sup>

ASTM D 790

Flexural Modulus (15mm/min)

24.000 kg/cm<sup>2</sup>

ASTM D 790

Izod Notched Impact Strength (23°C)

70 kg-cm/cm

ASTM D 256

## Thermal properties

HDT B (0.45mn/m<sup>2</sup>)

139°C

ASTM D 648

HDT B (1.81mn/m<sup>2</sup>)

128°C

ASTM D 648

Vicat softening temperature

150°C

ASTM D 1525

## Pre-drying Kratos PC

Kratos PC is a hygroscopic filament and therefore it is necessary to pre-dry the filament at 75°C for approximately 24 hours before usage. For optimal print results we recommend to print Kratos PC filament from a drying box to avoid that the material can accumulate humidity from the environment.

## Buildplate adhesion

For optimal buildplate adhesion we recommend to use a dedicated PC buildplate adhesive and to print a brim around your model. The brim is advised to hold down the edges of your part, which can prevent warping and help improve bed adhesion.

## Enclosure recommended for large(r) prints

Kratos PC can be 3D printed on open printers without a closed chamber for small(er) parts. For large(r) parts we do recommend to use a 3D printer with closed chamber.

## 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.



# TECHNICAL DATA SHEET

Kratos PC

Date of issue: 15-08-2024 / Date of update: 15-08-2024



## Product export information

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

## Disclaimer

*The product- and technical data provided in this datasheet is correct to the best of FormFutura BV's knowledge and are intended for reference and comparison purposes only. Actual values may vary according to printing conditions, model complexity, environmental conditions, etcetera. Typical values are indicative only and are not to be construed as being binding specifications. All other information supplied, including that herein, is considered accurate but is furnished upon the express condition that the customer shall make its own assessment to determine a product's suitability for a particular purpose. We make no warranty, express or implied, including regarding any information supplied or the data upon which it is based or the results to be obtained from the use of such products or information, or concerning product, whether of satisfactory quality, merchantability, fitness for any particular purpose or otherwise, or with respect to intellectual property infringement as a result of use of information or products, and none shall be implied.*

