

Technical Data Sheet

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Product Information

IIIDMAX Polycaprolactam Poly[imino(1,6-dioxohexamethylene) iminohexamethylene] (PA6/66) with 15% chopped carbon fiber. A 3D printer filament with excellent mechanical and thermal properties that can be printed on a wide variety of 3D printers without special requirements. A HARDENED NOZZLES ARE REQUIRED TO AVOID EXCESSIVE WEAR. CARBON FIBER FILAMENTS ARE ABRASIVE AND WILL QUICKLY DAMAGE BRASS NOZZLES. NOT COMPATIBLE WITH BAMBULAB AMS PRODUCTS.

Characteristics

- Reduced warping and water absorption compared to other polyamides
- Tough, rigid, and chemical resistant.
- Low VOCs

Filament Specifications

IIIDMAX does not opine, using the below data, on the suitability of the filament for any specific application, nor on the accuracy of such data. Your results may vary depending on the testing methodology, printing parameters used, and other factors that are not under the control of IIIDMAX. Note that the values provides herein are estimates and solely to be used for general guidance and may not be representative of the properties of a 3D printed part.

| Properties | Standard | Min | Max | Nominal | Units |
|------------------------------------|------------|------|------|---------|-------|
| Density | ASTM D-792 | 1.20 | 1.21 | 1.205 | g/cm³ |
| Deflection Temperature at 0.45 MPa | ASTM D-648 | 130 | 145 | 140 | °C |
| Tensile Strength, Break | ASTM D-638 | 32 | 36 | 34 | MPa |
| Tensile Modulus | ASTM D-638 | 2.0 | 2.9 | 2.45 | GPa |
| Flexural/Chord Modulus | ASTM D-790 | 2600 | 3220 | 2950 | MPa |
| Inter-matrix Water Absorption | ASTM D-570 | N/A | N/A | <2.5 | % |

Printing Specifications

The following printing specifications are recommendations and may not necessary be accurate to your printer. It is recommended to always perform proper calibration of new printer filament to ensure optimal results.

| Parameter | Min | Max | Units |
|-----------------------------------|-----|-----|-------|
| Nozzle Temperature | 265 | 285 | °C |
| Bed Temperature | 90 | 110 | °C |
| Printing Speed | 30 | 55 | mm/s |
| Cooling Fan % (not for overhangs) | 0 | 5 | % |
| Cooling Fan % (overhangs) | 10 | 20 | % |
| Drying Temperature | 70 | 95 | °C |
| Drying Time | 8 | 24 | hours |

