Technical Data Sheet

Product name:PETG-CF
Version: 1.0
Date: 01.21.2024

Dimensions

Size	Ø tolerance	Roundness
1,75 mm	± 0.05 mm	± 0.05 mm
2,85 mm	± 0,10 mm	± 0,10 mm

MATERIAL PROPERTIES

Description	Typical value	Test method
Density	1.1836g/cc	ISO 1183,GB/T 1033
Meltindex（MFR）	1.80 g/ min （190 °C/2,16kg）	ISO 1133,GB/T 3682
Glasstransition temperature	65.3°C	DSC,10°C/min
Melting temperature	134.06°C	DSC,10°C/min
Crystallizationtemperaturev	99.35855%	DSC,10°C/min
Vicatsofteningtemperature	67°C	ISO306,GB/T1633
Heatdeflectiontemperature	N/A	ISO 75 1.8MPa
Heatdeflectiontemperature	N/A	ISO 75 0.45MPa
Tensile strength at Yield	47.495 MPa	ISO 527, GB/T 1040
Strain at yield	13.116%	ISO 527, GB/T 1040
Strain at break	17.029%	ISO 527, GB/T 1040
E-Modulus	382.921MPa	ISO 527, GB/T 9341
Bendingmodulus	2127.100MPa	ISO 178, GB/T 9341
Bending strength	67.992MPa	ISO 178, GB/T 9341
Impact strength	2.626 kJ/ m²	ISO 179, GB/T 1043
Layer Adhesion (Impact Strength - Z)	2.905 kJ/ m²	ISO 179, GB/T 1043
Moisture absorption	0.09%	ISO 62 23℃， 50% RH

GUIDELINE FOR PRINT SETTINGS

Description	Typical value
Printing temperature	240 – 270 °C
Build Plate Compatibility	BuildTak®,Glass,BlueTape,PEI
Bed Temperature	70-100℃ (Glue Recommended)
Cooling fan	100%
Drying Settings	70-85℃ (Blast Drying Oven)
Printing speed	50-300(mm/s)
Carbon Fiber Percent	15%
Raftseparationdistance	0.2(mm)Settings are based on a 0.4mm nozzle.
Retractionspeed	40(mm/s)
Hotend Compatibility	0.2mm,0.3mm,0.4mm,0.6mm,0.8mm 1.0mm nozzle.
Environmentaltemperature	30℃ Roomtemperature

Packaging:
All spools are sealed and packed with silica gel to avoid humidity.

Additional info:
The typical values presented in this data sheet are intended for reference and comparison purposes only. They should not be used for design specifications or quality control purposes. Actual values may vary significantly with printing conditions. End- use performance of printed parts depends not only on materials, but also on part design, environmental conditions, printing conditions, etc. Product specifications are subject to change without notice.

Each user is responsible for determining the safety, lawfulness, technical suitability, and disposal/ recycling practices of R3D materials for the intended application. R3D makes no warranty of any kind, unless announced separately, to the fitness for any use or application. R3D shall not be made liable for any damage, injury or loss induced from the use of R3D materials in any application.

Storage: Cool and dry (15-25˚C) and away from UV light. This enhances the shelf life significantly.