

Technical Data Sheet

Product Name: PLA-CF

Version: 1.0

Date: 21.01.2024



MAERTZ

Dimensions

Size	∅ 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	1.206 g/cc	ISO 1183, GB/T 1033
Melt Index (MFR)	5.16 g/10 min (210 °C/2,16kg)	ISO 1133, GB/T 3682
Glass Transition Temperature	61.7°C	DSC,10°C/min
Melting Temperature	174.57°C	DSC,10°C/min
Crystallization Temperature	93.7644%	DSC,10°C/min
Vicat Softening Temperature	62.9°C	ISO306, GB/T1633
Heat Deflection Temperature	28.7°C	ISO 75 1.8MPa
Heat Deflection Temperature	30.9°C	ISO 75 0.45MPa
Tensile Strength at Yield	50.061 MPa	ISO 527, GB/T 1040
Strain at Yield	9.638%	ISO 527, GB/T 1040
Strain at Break	10.846%	ISO 527, GB/T 1040
E-Modulus	473.398 MPa	ISO 527, GB/T 9341
Bending Modulus	3191.612MPa	ISO 178, GB/T 9341
Bending Strength	80.532MPa	ISO 178, GB/T 9341
Impact Strength	2.863 kJ/ m ²	ISO 179, GB/T 1043
Layer Adhesion (Impact Strength - Z)	1.621 kJ/ m ²	ISO 179, GB/T 1043
Moisture Absorption	0.26%	ISO 62 23°C, 50% RH

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Guidelines for Print Settings

Description	Typical value
Printing temperature	220 – 260 °C
Build Plate Compatibility	BuildTak®, Glass,BlueTape,PEI
Bed Temperature	60-70°C (Glue Recommended)
Cooling fan	100%
Drying Settings	50-55°C (Blast Drying Oven)
Printing speed	30-300(mm/s)
AMS Compatibility	YES
Raftseparationdistance	0.2(mm)Settings are based on a 0.4mm nozzle.
Retractionspeed	30(mm/s)
Hotend Compatibility	0.2mm,0.3mm,0.4mm,0.6mm,0.8mm 1.0mm nozzle.
Environmenttemperature	30°C Roomtemperature

Packaging:

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

Handling and Storage:

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 Maertz materials for the intended application. Maertz makes no warranty of any kind, unless announced separately, to the fitness for any use or application. Maertz shall not be made liable for any damage, injury or loss induced from the use of Maertz materials in any application.

Storage:

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