

Technical Data Sheet

Product Name: PLA- Tri color

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	1.1128 g/cc	ISO 1183, GB/T 1033
Melt Index (MFR)	9.84 g/10 min (210 °C/2,16kg)	ISO 1133, GB/T 3682
Glass Transition Temperature	66°C	DSC,10°C/min
Melting Temperature	180.05°C	DSC,10°C/min
Crystallization Temperature	95.7899%	DSC,10°C/min
Vicat Softening Temperature	64°C	ISO306, GB/T1633
Heat Deflection Temperature	54°C	ISO 75 1.8MPa
Heat Deflection Temperature	57°C	ISO 75 0.45MPa
Tensile Strength at Yield	44.763 MPa	ISO 527, GB/T 1040
Strain at Yield	10.139%	ISO 527, GB/T 1040
Strain at Break	19.951%	ISO 527, GB/T 1040
E-Modulus	379.426 MPa	ISO 527, GB/T 9341
Bending Modulus	2837.735MPa	ISO 178, GB/T 9341
Bending Strength	80.582MPa	ISO 178, GB/T 9341
Impact Strength	2.589 kJ/ m ²	ISO 179, GB/T 1043
Layer Adhesion (Impact Strength - Z)	1.739 kJ/ m ²	ISO 179, GB/T 1043
Moisture Absorption	0.19%	ISO 62 23°C, 50% RH

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Guidelines for Print Settings

Description	Typical value
Printing Temperature	200 – 240 °C
Build Plate Compatibility	BuildTak®, Glass,BlueTape,PEI
Bed Temperature	55-70°C (Glue Recommended)
Cooling Fan	100%
Drying Settings	45-50°C (Blast Drying Oven)
Printing Speed	50-300(mm/s)
AMS Compatibility	YES
Raft Separation Distance	0.2(mm)Settings are based on a 0.4mm nozzle.
Retraction Speed	30(mm/s)
Hotend Compatibility	0.2mm,0.3mm,0.4mm,0.6mm,0.8mm 1.0mm nozzle.
Environmental Temperature	25°C Room temperature

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.