



## Technical Data Sheet

Product name: PLA Youth

Version: 1.0

Date: 07.2024

### Dimensions

Description	Typical value	Test method
1,75 mm	± 0.02 mm	± 0.02 mm
2,85 mm	± 0,10 mm	± 0,10 mm

### MATERIAL PROPERTIES

Description	Typical value	Test method
Density	1.33 g/cm <sup>3</sup>	ISO 1183,GB/T 1033
Meltindex (MFR)	11.9 g/10min (190 °C/2.16kg)	ISO 1133,GB/T 3682
Melting temperature	160 °C	DSC,10°C/min
Vicatsoftening temperature	61.5 °C	ISO306,GB/T1633
Heat deflection temperature	53.7 °C	ISO 75 0.45MPa
Tensile strength at Yield	38 MPa	ISO 527, GB/T 1040
Elongation at Break	11.8 %	ISO 527, GB/T 1040



<b>Flexural Modulus</b>	3300 MPa	ISO 527, GB/T 9341
<b>Flexural strength</b>	64 MPa	ISO 178, GB/T 9341
<b>Impact strength</b>	5.8 kJ/m <sup>2</sup>	ISO 179, GB/T 1043
<b>Layer Adhesion (Impact Strength - Z)</b>	2.8 kJ/m <sup>2</sup>	ISO 179, GB/T 1043
<b>Moisture absorption</b>	0.35%	ISO 62 23°C , 50% RH

#### GUIDELINE FOR PRINT SETTINGS

<b>Description</b>	<b>Typical value</b>
<b>Printing temperature</b>	190-230 °C
<b>Build Plate Compatibility</b>	BuildTak®, Glass, BlueTape, PEI
<b>Bed Temperature</b>	55-65°C (Glue Recommended)
<b>Cooling fan</b>	50-100%
<b>Drying Settings</b>	47-50°C , 4-6 h
<b>Printing speed</b>	<300 mm/s
<b>AMS Compatibility</b>	YES
<b>Raftseparationdistance</b>	0.5-1.5mm
<b>Retractionspeed</b>	40-60mm/s
<b>Hotend Compatibility</b>	0.2-0.8mm nozzle, copper.
<b>Environmenttemperature</b>	25°C -45°C



**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.