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GRATKIT

Technical Datasheet

GratKit Filament – Standard PLA



Identification

Trade Name	GratKit PLA
Chemical Name	Polylactic Acid
Main Material	4032D, toughener and color additives
Usage	FDM/FFF 3D printing
Diameter	1.75±0.03mm
Manufacturer	GratKit

Recommended print settings

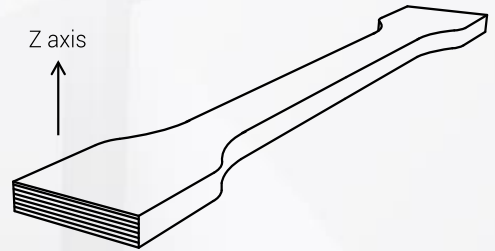
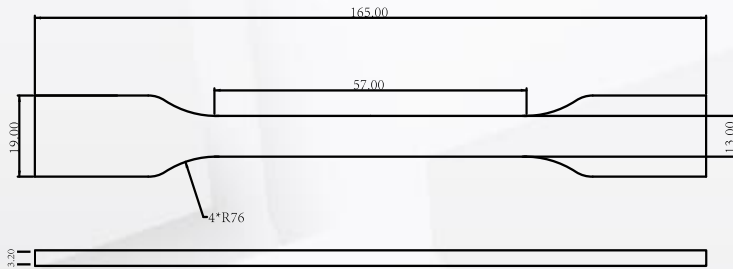
Nozzle Temperature[°C]	200±10(All metal hotend + 5)
Platform Temperature[°C]	50(PEI) 60(Glass)
Print Speed [mm/s]	up to 350
Retract Speed[mm/s]	40(Direct drive) 60(Bowden)
Retract Length[mm]	2(Direct drive) 6(Bowden)
Brim	No need

Specification

Physical Properties	Typical Value	Method
Density[g/cm ³]	1.25	ISO 1183
Heat Deflection Temperature(0.45MPa)[°C]	60	ISO 75
Heat Deflection Temperature(1.80MPa)[°C]	60	ISO 75
Tensile Strength at Yield[Mpa]	36±1.5	ASTM D638
Elongation at Yield Point(%)	2.8±0.3	ASTM D638
Flexural Modulus[GPa]	3.28±0.1	ASTM D790
Flexural Strength[MPa]	85.1±2.9	ASTM D790
Interlayer Adhesion[Mpa]	15±3	GratKit Filament
MFR[g/10min](1)	9-11	ISO 1133
MVR[cm ³ /10min](1)	8-10	ISO 1133

(1) 2.16kg, 210°C

Testing Geometries



Testing prints setting: 0.1mm/layer, 100% infill, 0.4mm line width, nozzle 205°C, print surface 55°C, shells 1.2mm, speed 60mm/s.

Filament spool size



Disclaimer:

The results presented in this data sheet are just for your information and comparison. Values are significantly dependent on print settings, operator experiences, and surrounding conditions. Everyone has to consider suitability and possible consequences of printed parts usage. GratKit can not carry any responsibility for injuries or any loss caused by using GratKit material.