

PLA 3D Filament

Based on biopolymer derived from organic sources. It is the most common used 3D filament in FFF (FDM) printers. Odourless, biodegradable, good tensile strenght. Withstand operating temperatures up to 58°C.

Material properties

Description	Method	Typical value
Density	--	1.24 g/cm ³
Melt Flow Index	ISO 1133-A (210°C/2.16 kg)	8 g/10 min
Glass transition temperature	DSC	60°C
Melting temperature	DSC	175°C
Heat deflection temperature	ISO 75-1 amorphous (HDT B, 0.45MPa)	58°C
Tensile strenght	ISO 527-1	50 MPa
Tensile modulus	ISO 527-1	3500 Mpa
Elongation at break	ISO 527-1	≤ 5%
Charpy notched impact, 23°C	ISO 179-1eA	≤ 5 kJ/m ²

Printing properties

Hotend temperature	210 -230°C
Heatbed temperature	0 - 60°C
Cooling print object	yes
Nozzle diameter	commonly used
Printing environment	open space or inside of box
Bed surface	commonly used (glassbed, PEI, steel etc..)
Bed adhesive	glue stick, 3Dlac
Drying material	4 - 6 hours at 50°C

Type of spool	Weight of empty spool
750 gr transparent	230gr
1 kg transparent	250gr
1 kg black	220gr
2,5kg black	500gr