

PLA – Material Properties, Printing Parameters & Characterisation

Material Property	PLA
Density	1.21 g/cm ³
Melting Point	10 g/10min
Tensile Strength (X-Y)	70 MPa
Elongation at Break (X-Y)	2.3%
Bending Strength (X-Y)	98 MPa
Bending Modulus (X-Y)	3316 MPa
Notched Impact Strength (X-Y)	3.52 KJ/m ²
Heat Deflection Temp (0.45 MPa)	56.2 °C
Printing Parameter	
Storage Humidity	Seal and add desiccant; <20% RH
Drying Conditions Before Printing	65–70°C, 8h
Print Speed	<300 mm/s
Nozzle Material Requirements	Stainless Steel / Hardened Steel / Brass
Printing Temperature	190–220°C
Characterisation	
Description	Safe and environmentally friendly, biodegradable from bio-based materials, supports high-speed printing, resistant to nozzle clogging, high dimensional accuracy, excellent rigidity.