

PLA TOUGH · Technical Data Sheet

General Features

Chemical Name Enhanced Polylactic Acid	Benefits <ul style="list-style-type: none"> • High strength • Very low shrinkage 	Main Applications Concept modeling, Educational projects, Design objects, Ideal for prototypes and functional parts.
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Filament Characteristics

Diameter	Ø 1.75mm	Ø 2.85mm
Meters per spool	308.726m	116.402m
Weight per meter	2.43g	6.44g
Tolerance	±0.02mm	±0.03mm

Material Properties

		XY Axis	YX Axis	ZX Axis	ASTM Method
Tensile Strength, psi	MPa	5.802(40)	4.641(32)	3.481(24)	D638
Tensile Modulus, kpsi	MPa	416(2,865)	355(2447)	359(2,477)	D638
Flexural Strength, psi	MPa	10.588(73)	7.106(49)	6.672(46)	D790
Flexural Modulus, kpsi	MPa	350(2,414)	287(1979)	341(2,352)	D790
Notch Izod Impact (amorphus) ft-lb/in	J/m	2.99(160)	2.26(21)	2.04(109)	D256
Notch Izod Impact (crystalline) ft-lb/in	J/M	4.37(233)	3.74(200)	1.19(64)	D256
Heat Distortion Temperature	°C	--	75-85	--	E2092

		3D870	ASTM Method
Specific Gravity	g/cc	1.22	D792
MFR g/10 min	g/min	9-15	D1238
Peak Melt Temperature	°C	165-180	D3418
Glass Transition Temperature	°C	55-60	D3418

Recommended printer settings

Print temperature	205±10°C
Print bed temperature	50° First/Later
Cooling fans	On, except first layer
Closed environment	Not required
Adhesive	Required

Available Colours

Colour	Pantone Code	Colour	Pantone Code
Black	6C	Natural	--
Blue	2935 C	Red	485 C
Gray	8402 C	White	11-4001

Disclaimer:

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