

## PLA TOUGH · Technical Data Sheet

### General Features

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

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

### Material Properties

		XY Axis	YX Axis	ZX Axis	ASTM Method
<b>Tensile Strength</b>	psi (MPa)	5.802(40)	4.641(32)	3.481(24)	D638
<b>Tensile Modulus</b>	kpsi (MPa)	416(2,865)	355(2447)	359(2,477)	D638
<b>Flexural Strength</b>	psi (MPa)	10.588(73)	7.106(49)	6.672(46)	D790
<b>Flexural Modulus</b>	kpsi (MPa)	350(2,414)	287(1979)	341(2,352)	D790
<b>Notched Izod Impact (amorphous)</b>	ft-lb/in (J/m)	2.99(160)	2.26(121)	2.04(109)	D256
<b>Notched Izod Impact (crystalline)</b>	ft-lb/in (J/m)	4.37(233)	3.74(200)	1.19(64)	D256
<b>Heat Distortion Temperature</b>	°C	--	75-85	--	E2092

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

### Recommended printer settings

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