



Technical Data Sheet

Polylactic Acid (PLA) Everyday Filament

General Information

Polylactic Acid (PLA) filament stands as the most widely used 3D printing material in the industry. This premium bioplastic product is derived from renewable natural resources. While ideal for various applications, it may not be suitable for thin, high-strength projects.

Users

Beginners

Available in Standard Colors

See website for available colors

Features & Benefits

- Low odor
- Non-toxic
- Renewably sourced
- Bio-friendly
- Minimal warping and shrinking
- Can be painted

Available Sizes

See website for details

Quality

All ABC3D filaments are produced using a **5-Axis** laser-controlled precision providing the highest class of products for the 3D printing industry. Each box contains the same material, size, and color. All filaments are vacuumed and sealed with desiccant. Rest assured, our products are carefully crafted to deliver consistent excellence in every print.

Tolerances + 0.003" / -0.003"

Storage

Store between 17 to 28 °C in a dry area, away from sunlight. Keep sealed in an airtight container.

Physical Properties	Standard	Unit	Value
Density	ASTM D1505	g/cm ³	1.23±0.02
Mechanical Properties	Standard	Unit	Value
Tensile modulus	ASTM D638-14	MPa	3250±48
Tensile elongation	ASTM D638-14	%	3.7±0.3
Tensile strength	ASTM D638-14	MPa	63.4±6.7
Zero-shear viscosity	ASTM D4440-15	Pa.s	1.6×10 ³
Thermal Properties	Standard	Unit	Value
Glass transition temperature (T _g)	DSC	°C	62
Shrinking	ASTM D6289-13	%	0.1
Electrical Properties	Standard	Unit	Value
Electrical resistivity	ASTM D257	Ω.cm	>10 ⁶

Print Settings	Unit	Value
Nozzle temperature	°C	190-230
Heated bed temperature	°C	40-60
Print speed	mm/s	30-70
Extrusion width	mm	0.45
Volume flow rate	mm ³ /s	2-3

Disclaimer

The technical data contained on this data sheet is furnished without charge or obligation and accepted at the recipient's sole risk. This data should not be used to establish specifications limits or used alone as the basis of design. The data provided is not intended to substitute any testing that may be required to determine fitness for any specific use.