



Performance PLA

Polylactic Acid

High Heat, High Impact Blend

Performance Polylactic Acid (PLA) filament is the most common 3D printing material used in the 3D printing industry today. The premium bioplastic product is made from renewable natural resources and is biodegradable. This blend is made with a high heat, high impact grade of PLA developed for applications typically used with materials like ABS, while retaining its biodegradability. This resin has improved heat resistance and exhibits faster crystallization.

Features & Benefits

- Bio-friendly
- Easy to use
- Minimal warping and shrinking
- Can be painted

Typical advantages of using this blend over Standard PLA

- Significant heat resistance improvement
- Significant impact resistance improvement
- Higher detail or resolution of prints
- Lower odor
- Improved layer adhesion
- Reduced warping, curling, deforming

Users

Beginners, Advanced Users, Prototypers, Additive Manufacturers

Available Sizes

- 1.75 mm
- 3 mm (Filament diameter measures 2.88 mm)

Individual Packaging Stock

- 1 kg reels
- 5 lb reels

Standard Colors

- Natural
- Black
- White
- Red
- Yellow
- Green
- Orange
- Blue
- Silver

On Request

- 0.5 kg reels
- 10 lb reels (lead time maybe longer)
- 15 lb reels (lead time maybe longer)
- 30 lb reels (lead time maybe longer)
- Coils in various weights

Full Box Packaging

- 0.5 kg reels packaged 14 to a box
- 1 kg reels packaged 12 to a box
- 5 lb reels packaged 6 to a box

Each box contains the same material, size and color. All filaments are vacuumed sealed with desiccant.

Tolerances

+ 0.003" / -0.003"

Recommended Printer Specifications

3D Printing Temp: 190°C – 230°C

Print Bed Temp: 0°C – 70°C

Annealing Temp: 110°C – 120°C

Usage Tips

For greater strength, the print can be annealed
Reduce printing speeds to increase print quality
Use rafts and supports as necessary
Clean the nozzle after every use

Material Comparisons

	Performance PLA	Standard PLA*	ABS**
Heat Distortion Temp:	144°C (291°F)	55°C (131°F)	85°C (185°F)
Flexural Modulus, psi (MPa):	646,000 PSI	555,000 PSI	298,000 PSI
Flexural Strength, psi (MPa):	18,300 PSI	12,000 PSI	8,500 PSI
Tensile Yield Strength, psi (MPa):	9,500 PSI	8,700 PSI	5,900 PSI

*Ingeo 4043D PLA

**Samsung SD-0150 GP ABS

Heat Deflection Temperature: Measure of a polymer's ability to bear a given load at elevated temperatures; the temperature at which it deforms.

Flexural Modulus: Pressure required to start the bending; stiffness; the tendency of the material to bend.

Flexural Strength: pressure required before a certain degree of deformation; degree of deformation at which the test fails.

Tensile Yield Strength: maximum stress before breaking when being stretched from both ends.

Quality

All Keene Village Plastics 3D printer filaments are manufactured in Barberton, Ohio, USA with top quality raw materials and **3-Axis** laser-controlled precision providing the highest class of products for the 3D printing industry.



P.O. Box 24376
Mayfield Heights, OH 44124
sales@villageplastics.com
KeeneVillagePlastics.com

P 330 | 753 | 0100
F 330 | 753 | 6610

2/2
2018/1