

## Premium 3D Printer Filament

### Description

PLA is the most popular resin for 3D printing because it is easy to use and has almost no odor. It adheres well to masking tape without requiring a heated printing bed or noxious solvents. It is an optimal choice for homes, schools and laboratories, and has many commercial applications.

MG Chemicals premium 3D printing filaments are manufactured under strict quality control to ensure consistency. Our spools have a large hub to ensure uniform winding, and cut-outs on the sides so the user can easily see how much filament is left.

### Features and Benefits

- Diameter: 1.75 or 2.85 mm; Weight: 0.5 or 1 kg/spool
- Dimensional accuracy:  $\pm 0.03$  mm
- Vacuum-sealed with desiccant in resealable bags
- Recommended print temperature: 200 to 220 °C (392 to 428 °F)
- Recommended bed temperature: 22 to 50 °C (72 to 122 °F)
- Spool diameter: 7 $\frac{3}{4}$ "; Spool width: 2 $\frac{1}{2}$ "; Hub diameter: 3 $\frac{1}{2}$ "; Hub hole diameter: 2 $\frac{1}{8}$ "

### Usage Parameters

Properties	Value
Storage temperature	18–27 °C [65–80 °F] <sup>a)</sup>
Shelf life, unopened package	1 y from date of purchase
Shelf life, opened package	Variable depending on storage conditions

a) Keep sealed in an air tight container, away from humidity.

### Temperature Ranges

Properties	Value
Print temperature	200–220 °C [392–428 °F]
Bed temperature	22–50 °C [72–122 °F]

**NOTE:** Values may vary depending on the printer type, environmental conditions, and color of filament. Adjust print temperatures by 5 °C until ideal flow and bed adhesion is obtained.

## Properties

Physical Properties	Method	Value
Density	ASTM D 1505	1.24 g/cm <sup>3</sup>
Tensile strength	ASTM D 882, Machine Direction	100 N/mm <sup>2</sup> [15 000 lb/in <sup>2</sup> ]
% Elongation	ASTM D 882, Machine Direction	180%
Young's modulus	ASTM D 882, Machine Direction	3 500 N/mm <sup>2</sup> [500 000 lb/in <sup>2</sup> ]
Elmendorf tear	ASTM D 1922, Machine Direction	670 g/mm [17 g/mil]
Optical, haze	ASTM D 1003	2.1%
Optical, gloss 20°	ASTM D 1003	90%
Thermal Properties	Method	Value
Melting point	ASTM D 3418	115 to 170 °C [239 to 338 °F]

## Storage

Store between 18 to 27 °C [65 to 80 °F] in a dry area, away from sunlight. Keep sealed in an air tight container, away from humidity.

## Health, Safety, and Environmental Awareness

Please see the PLA Safety Data Sheet (SDS) for further details on transportation, storage, handling, safety guidelines, and regulatory compliance.

## Packaging and Supporting Products

### Available Colors



**Fluorescent Red**  
PLA17FLRE1



**Fluorescent Yellow**  
PLA17FLYE1



**Thermochromic Red**  
PLA17THRE1



**Black**  
PLA17BK1  
PLA30BK1



**Blue**  
PLA17BL1  
PLA30BL1



**Brown**  
PLA17BR1  
PLA30BR1



**Gold**  
PLA17GO1  
PLA30GO1



**Green**  
PLA17GR1  
PLA30GR1



**Grey**  
PLA17GY1  
PLA30GY1



**Lime Green**  
PLA17LI1  
PLA30LI1



**Navy**  
PLA17NA1  
PLA30NA1



**Orange**  
PLA17OR1  
PLA30OR1



**Pink**  
PLA17PI1  
PLA30PI1



**Purple**  
PLA17PU1  
PLA30PU1



**Red**  
PLA17RE1  
PLA30RE1



**Silver**  
PLA17SI1  
PLA30SI1



**Light Skin**  
PLA17SK1  
PLA30SK1



**Translucent**  
PLA17TL1  
PLA30TL1



**White**  
PLA17WH1  
PLA30WH1



**Yellow**  
PLA17YE1  
PLA30YE1



**Glow in the Dark Green**  
PLA17GD1  
PLA17GD5  
PLA30GD1



**Super Glow Natural**  
PLA17SGN1  
PLA30SGN1



**Fluorescent Green**  
PLA17FLGR1



**Copper**  
PLA17CP1

**Dimensions for 0.5 kg Spool**

Filament Diameter	Filament Length
1.75 mm	167 m

**Dimensions for 1.0 kg Spool**

Filament Diameter	Filament Length
1.75 mm	335 m
2.85 mm	126 m

**NOTE:** Dimensions listed above are approximations.

Net Weight	Net Volume	Packaging Weight
1.0 kg [2.2 lb]	806 mL [1.70 pt]	1.35 kg [2.98 lb]

**Supporting Products**

- 3D Printing Masking Tape: Cat. No. MAS100-15
- 3D Printing Polyimide Tape: Cat. No. POL100, POL200
- Acetone: Cat. No. 434-1L, 434-4L
- d-Limonene Industrial Strength: Cat. No. 433C-1L, 433C-4L

## Technical Support

Please contact us regarding any questions, suggestions for improvements, or problems with this product. Application notes, instructions and FAQs are located at [www.mgchemicals.com](http://www.mgchemicals.com).

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## Disclaimer

This information is believed to be accurate. It is intended for professional end users who have the skills required to evaluate and use the data properly. M.G. Chemicals Ltd. does not guarantee the accuracy of the data and assumes no liability in connection with damages incurred while using it.

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