

## Premium 3D Printer Filament

### Description

ABS filament resists higher temperatures and offers great machinability, flexibility and strength, making it the preferred choice of engineers and professionals. ABS plastic can be vapor smoothed, dissolved, or welded in 434 Acetone, making post-processing easy.

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: 1 kg/spool
- Dimensional accuracy:  $\pm 0.03$  mm
- Vacuum-sealed with desiccant in resealable bags
- Recommended print temperature: 230 to 240 °C (446 to 464 °F)
- Recommended bed temperature: 80 to 115 °C (176 to 239 °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	230–240 °C [446–464 °F]
Bed temperature	80–115 °C [176–239 °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 792	1.05 g/cm <sup>3</sup>
Tensile strength	ASTM D 638	45 N/mm <sup>2</sup> [6 500 lb/in <sup>2</sup> ]
% Elongation	ASTM D 638	25%
Flexural strength	ASTM D 790	77 N/mm <sup>2</sup> [11 000 lb/in <sup>2</sup> ]
Flexural modulus	ASTM D 790	2 650 N/mm <sup>2</sup> [384 000 lb/in <sup>2</sup> ]
Izod impact strength	ASTM D 256	18 000 g·cm/cm
Hardness <sup>a)</sup>	ASTM D 785	116 R Scale
UL flammability rating	—	UL-94 HB
Thermal Properties	Method	Value
Melt flow index @200 °C, 5 kg load @220 °C, 10 kg load	ASTM D 1238	1.6 g per 10 min 22 g per 10 min
Vicat softening temperature @50 °C/h, 3 mm	ASTM D 1525	105 °C [221 °F]
Heat distortion temperature Annealed Unannealed	ASTM D 648	95 °C [203 °F] 85 °C [185 °F]

a) Rockwell hardness scale

## Storage

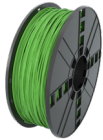
Store between 18 to 27 °C [65 to 80 °F] in a dry area, away from sunlight. Keep sealed in an air tight container, away from humidity.

## Health, Safety, and Environmental Awareness

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

## Packaging and Supporting Products

### Available Colors



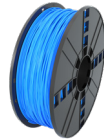
**ThermoChromic Green**  
ABS17THGR1  
ABS30THGR1



**ThermoChromic Purple**  
ABS17THPU1  
ABS30THPU1



**Black**  
ABS17BK1  
ABS30BK1



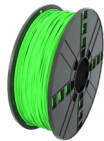
**Blue**  
ABS17BL1  
ABS30BL1



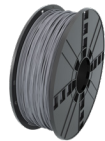
**Brown**  
ABS17BR1  
ABS30BR1



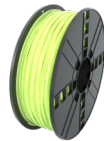
**Gold**  
ABS17GO1  
ABS30GO1



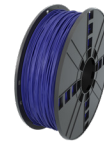
**Green**  
ABS17GR1  
ABS30GR1



**Grey**  
ABS17GY1  
ABS30GY1



**Lime Green**  
ABS17LI1  
ABS30LI1



**Navy**  
ABS17NA1  
ABS30NA1



**Orange**  
ABS17OR1  
ABS30OR1



**Pink**  
ABS17PI1  
ABS30PI1



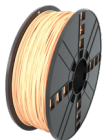
**Purple**  
ABS17PU1  
ABS30PU1



**Red**  
ABS17RE1  
ABS30RE1



**Silver**  
ABS17SI1  
ABS30SI1



**Skin**  
ABS17SK1  
ABS30SK1



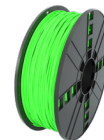
**Translucent**  
ABS17TL1  
ABS30TL1



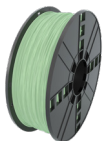
**White**  
ABS17WH1  
ABS30WH1



**Yellow**  
ABS17YE1  
ABS30YE1



**Glow in the Dark**  
ABS17GD1  
ABS30GD1



**Super Glow Natural**  
ABS17SGN1  
ABS30SGN1

### Dimensions for 1.0 kg Spool

Filament Diameter	Filament Length
1.75 mm	395 m
2.85 mm	149 m

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

Net Weight	Net Volume	Packaging Weight
1.0 kg [2.2 lb]	952 mL [1.00 qt]	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

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