

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: ± 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] ^{a)}
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 ³
Tensile strength	ASTM D 638	45 N/mm ² [6 500 lb/in ²]
% Elongation	ASTM D 638	25%
Flexural strength	ASTM D 790	77 N/mm ² [11 000 lb/in ²]
Flexural modulus	ASTM D 790	2 650 N/mm ² [384 000 lb/in ²]
Izod impact strength	ASTM D 256	18 000 g·cm/cm
Hardness ^{a)}	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.

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Disclaimer

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