

## Description

The *Premium 3D Printer Filament—ABS* is made of high purity acrylonitrile butadiene styrene (ABS) pellets with a tight diameter tolerance.

## Applications & Usages

The ABS filament is preferred by engineers and professionals because of its high temperature resistance, machinability, flexibility, and strength. ABS is easily soluble and welded in acetone.

## Benefits and Features

- **1.75 mm and 3.00 mm diameters**
- **Low diameter variance**
- **Vivid and unique colors such as Skin, Gold, Silver, Glow in the Dark, and so on**

## 3D-Filament Processing Parameters

<i>Processing Parameters</i>	<i>Temperature</i>
Working Temperature	230–240 °C [446–464 °F]
Bed Temperature	90–110 °C [194–230 °F]

a) 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.

## 3D-Filament Properties

<i>Quality Control</i>	<i>Method</i>	<i>Value</i>
Specific Gravity	ASTM D 792 @ 23 °C	1.05 g/cm <sup>3</sup>

<i>Physical Properties</i>	<i>Method</i>	<i>Value</i>
Tensile Strength	ASTM D 638	45 N/mm <sup>2</sup> [6 500 lb/in <sup>2</sup> ]
% Elongation	"	25%
Flexural Strength	ASTM D 790	77 N/mm <sup>2</sup> [11 000 lb/in <sup>2</sup> ]
Flexural Modulus	"	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

a) Rockwell hardness scale

<i>Thermal Properties</i>	<i>Method</i>	<i>Value</i>
Melt Flow Index	ASTM D 1238 @200 °C, 5 kg load	1.6 g per 10 min
	ASTM D 1238 @220 °C, 10 kg load	22 g per 10 min
Vicat Softening Temperature	ASTM D 1525 @50 °C/h, 3 mm	105 °C [221 °F]
Heat Distortion Temperature	ASTM D 648, Annealed	95 °C [203 °F]
	ASTM D 648, Unannealed	85 °C [185 °F]

## Storage and Shelf Life

Store between 18 to 27 °C [65–80 °F] and protect from direct heat or sunlight. Keep sealed in an air tight container, away from humidity.

<i>Shelf Life</i>	<i>Value</i>
Unopened package	1 y from date of purchase
Opened package	Variable depending on storage conditions

## Health and Safety

Please see the *Premium 3D Printer Filament-ABS Safety Data Sheet* (SDS) for more details on transportation, storage, handling and other security guidelines.

**Environmental Impact:** This product doesn't have any known environmental toxicity.



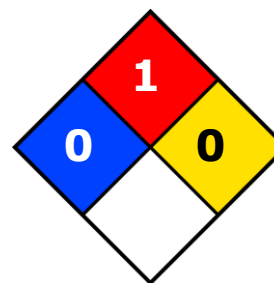
This product meets the European Directive 2011/65/EU Annex II (ROHS); recasting 2002/95/EC.

**Health and Safety:** This product is not considered to be hazardous for human health under normal use. It is widely used in the packing and food industry.

### HMIS® RATING

<b>HEALTH:</b>	<b>0</b>
<b>FLAMMABILITY:</b>	<b>1</b>
<b>PHYSICAL HAZARD:</b>	<b>0</b>
<b>PERSONAL PROTECTION:</b>	

### NFPA® 704 CODES



*Approximate HMIS and NFPA Risk Ratings Legend:*

0 (Low or none); 1 (Slight); 2 (Moderate); 3 (Serious); 4 (Severe)

## Packaging and Supporting Products

### Available Colors



### Available Sizes

<i>Diameter</i>	<i>Filament Length</i>		
	0.25 kg spools	0.50 kg spools	1.0 kg spools
1.75 mm	105 m	210 m	420 m
3.00 mm	32.5 m	65 m	130 m

<i>Spool Weight</i>	<i>Dimensions</i>		
	Inner diameter	Outer diameter	Width
0.25 kg	32 mm	160 mm	57 mm
0.50 kg	32 mm	160 mm	57 mm
1.00 kg	57 mm	180 mm	92 mm

<i>Diameter</i>	<i>Spool Weight</i> kg	<i>Net Volume</i>		<i>Net Weight</i>	
		L	qt	kg	lb
1.75 mm or 3.00 mm	0.25	0.238	0.252	0.25	0.55
	0.50	0.476	0.503	0.50	1.1
	1.00	0.952	1.01	1.0	2.2

*Note:* Some colors are not available in all sizes. Use the 3D filament Part Selection Tool for ABS on the MG Chemical web site or [click here](#).



ISO 9001 Registered Quality System.  
Burlington, Ontario, Canada QMI File # 004008

# Premium 3D Printer Filament—ABS

ABS

## Supporting Products

- *3D Printing Masking Tape*, Cat. No. MAS100-15, MAS200-15
- *3D Printing Polyimide Tape*, Cat. No. POL100, POL200
- *Acetone*, Cat. No. 434-1L, 434-4L
- *d-Limonene, Pure Grade*: Cat. No. 433-1L, 433-4L

## Technical Support

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

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## Warranty

*M.G. Chemicals Ltd.* warrants this product for 12 months from the date of purchase by the end user. *M.G. Chemicals Ltd.* makes no claims as to shelf life of this product for the warranty. The liability of *M.G. Chemicals Ltd.* whether based on its warranty, contracts, or otherwise shall in no case include incidental or consequential damage.

## Disclaimer

This information is believed to be accurate. It is intended for professional end users having the skills 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.