

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 ³

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

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.



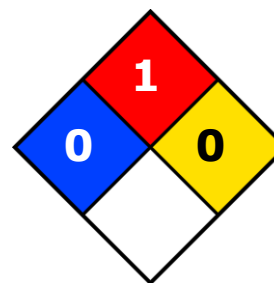
This product meets the European Directive 2011/65/EU Annex II (ROHS); recasting 2002/95/EC.

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

HEALTH:	0
FLAMMABILITY:	1
PHYSICAL HAZARD:	0
PERSONAL PROTECTION:	

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.

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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.