

Description

The *Premium 3D Printer Filament—HIPS* is made of dissolvable high impact polystyrene (HIPS) with a tight diameter tolerance.

Application & Usages

The HIPS filament is used as support material for 3D printers with dual heads. HIPS supports are easily soluble in d-Limonene, freeing the intricate ABS or PLA printed designs.

Benefits and Features

- **1.75 mm and 3.00 mm diameters**
- **Low diameter variance**

3D-Filament Processing Parameters

<i>Processing Parameters</i>	<i>Temperature</i> ^{a)}	
Working Temperature	235 °C	[455 °F]
Bed Temperature	115 °C	[239 °F]

a) Values may vary depending on the printer type and environmental conditions. 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	ISO 1183 @23 °C	1.05 g/cm ³

<i>Physical Properties</i>	<i>Method</i>	<i>Value</i>
Ball Indentation Hardness	ISO 2039-1	90 N/mm ² [13 000 lb/in ²]
Tensile Strength	ISO 527	27 N/mm ² [3 900 lb/in ²]
% Elongation	"	64%
Flexural Strength	ISO 178	40 N/mm ² [5 800 lb/in ²]
Flexural Modulus	"	1 600 N/mm ² [230 000 lb/in ²]
Izod Impact Strength	ISO 180/1A, notched	7 kJ/m ²
Charpy Impact Strength	ISO 179, notched	8 kJ/m ²
UL Flammability Rating		UL-94 HB

<i>Thermal Properties</i>	<i>Method</i>	<i>Value</i>
Melt Flow Index	ISO 1133 @200 °C, 5 kg load	5.5 mL per 10 min
Vicat Softening Temperature	ISO 306 @50 °C/h, 1 kg load	100 °C [212 °F]
Heat Distortion Temperature	ISO 75 @1.8 N/mm ² Unannealed	78 °C [172 °F]
	ISO 75 @1.8 N/mm ² Annealed	94 °C [201 °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-HIPS 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.



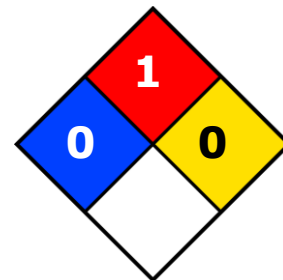
This product meets the European Directive 2011/65/EU Annex II (ROHS); recasting 2002/95/EC.

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



White

Available Sizes

<i>Diameter</i>	<i>Filament Length</i> 0.5 kg spool
1.75 mm	410 m
3.00 mm	140 m

<i>Spool Weight</i>	<i>Dimensions</i>		
	Inner diameter	Outer diameter	Width
0.50 kg	32 mm	160 mm	57 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	0.50	0.476	0.503	0.50	1.1

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

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.

Email: support@mgchemicals.com

Phone: +1-800-340-0772 (Canada, Mexico & USA)
+1-905-331-1396 (International)

Fax: +1-905-331-2862 or +1-800-340-0773

Mailing address: **Manufacturing & Support**
1210 Corporate Drive
Burlington, Ontario, Canada
L7L 5R6

Head Office
9347-193rd Street
Surrey, British Columbia, Canada
V4N 4E7



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

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HIPS

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.