

FIL-A-GEHR®

Filaments for professional 3D printing



» PEEK

» PEEK 

» PPSU

» PPA

» PA12

» PC / ABS

» PLA

» ABS

Visit our Online-Shop:
www.filagehr.com

FIL-A-GEHR® RANGE OF PRODUCTS

FIL-A-GEHR PEEK®

The semi-crystalline polyetheretherketone offers outstanding mechanical, thermal and chemical resistance. Thanks to its well-balanced property profile, PEEK is one of the most capable high-performance thermoplastics available.

- » Excellent combination of strength, stiffness and toughness
- » Low moisture absorption
- » Exceptional chemical resistance
- » Maximum continuous operating temperature 260 °C
- » Excellent sterilisation and hydrolysis resistance
- » Self-extinguishing, low smoke emission
- » Print temperature 375 °C, chamber temperature 180 °C



MEDI-FIL-A-GEHR PEEK MG®

Is suitable for medical and pharmaceutical applications in direct body contact with tissue, bone, skin and mucous membrane up to 24 hours. They have been tested and evaluated by independent, accredited test laboratories and meet the following biocompatibility requirements:

- » ISO 10993-5: Tests for in-vitro cytotoxicity
- » ISO 10993-18: Chemical characterisation of materials
- » USP Class VI



MEDI-GEHR®

FIL-A-GEHR PPSU®

Polyphenylsulfone is an amorphous material, with improved impact and hydrolysis resistance compared to PSU and PEI. The extremely high notch impact strength remains also after a heat aging.

- » High strength and rigidity
- » Very high toughness (also at low temperatures)
- » Very good dimensional stability
- » Very high chemical resistance
- » High continuous operating temperature of 170 °C
- » Very good sterilizability



FIL-A-GEHR PPA®

is a particularly stiff and hard material. The material is particularly suited for 3D printing. Unlike carbon fibre filled materials, the print nozzles do not wear. Material distortion is minimal in 3D printing.

- » High stiffness, modulus of elasticity (3000 MPa)
- » Very high stability (Tensile Stress at Yield 100 MPa)
- » Very good layer adhesion
- » High hardness level
- » Low warpage
- » Heat resistance up to approx. 105 °C

FIL-A-GEHR PA12®

Compared to other polyamides, FIL-A-GEHR PA 12® has the lowest moisture absorption. The very low tendency to warping combined with very good layer adhesion and low processing temperature makes PA 12 an ideal material for 3D printing.

- » Excellent chemical resistance, in particular against mineral oil and glycol
- » Low moisture absorption / high dimensional stability
- » High strength
- » Low wear / excellent sliding friction
- » High impact strength
- » High continuous operating temperature of 85 °C




FIL-A-GEHR PC/ABS®

combines the high impact strength and heat deflection temperature of PC with the high toughness at low temperatures and the good processability of ABS.

- » Optimized flow behaviour
- » Heat deflection temperature between 110 °C (230 °F) and 135 °C (275 °F)
- » Methods such as painting and glueing can be applied
- » Very good electrical insulating properties
- » High notch impact strength values over wide temperature range
- » High dimensional stability
- » Low tendency to warping



FIL-A-GEHR PLA®

is based on the high-quality Ingeo™ biopolymer by  NatureWorks. Perfect for a precise, smooth and very stable 3D printing.

- » High dimensional stability
- » Very good layer adhesion
- » No embrittlement on the spool (long term flexural test)
- » Raw material PLA has food contact and toy safety approval
- » High stiffness / high modulus of elasticity (3.380 MPa)



FIL-A-GEHR ABS®

is a high-quality thermoplastic polymer with excellent mechanical properties.

- » Low-emission and low-odour
- » FIL-A-GEHR ABS® compliant to European Toy Safety Norm EN71-3
- » Raw material ABS has food contact and medical approval
- » High stability and impact strength
- » Heat resistant up to approx. 100 °C (212 °F)
- » Easy post-treatment or surface treatment

All **FIL-A-GEHR®** - products have the following distinguishing features::

- » Highest precision in diameter and roundness
- » Filaments made of high-quality raw materials
- » Compatible with all open-system 3D printers
- » Low-emission and odour free
- » Void-free
- » Good layer adhesion
- » Ideal flow behaviour while printing
- » Carefully spooled and packed in easy to use aluminium-laminated resealable zip bags

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FIL-A-GEHR® PRODUCT RANGE

	∅	1 kg-spool/ ~ 2,2 lbs	2,3 kg-spool/ ~ 5,1 lbs.
FIL-A-GEHR PEEK	1,75 mm	●	
	2,85 mm	●	
MEDI-FIL-A-GEHR PEEK MG	1,75 mm	●	
FIL-A-GEHR PPSU	1,75 mm	● ●	
FIL-A-GEHR PPA	1,75 mm	●	
FIL-A-GEHR PA12	1,75 mm	●	
	2,85 mm	●	
FIL-A-GEHR PC/ABS	1,75 mm	●	●
	2,85 mm	●	●
FIL-A-GEHR ABS	1,75 mm	● ● ● ● ●	● ● ● ● ●
	2,85 mm	● ● ● ● ●	● ● ● ● ●
FIL-A-GEHR PLA	1,75 mm	● ● ● ● ● ●	● ● ● ● ● ●
	2,85 mm	● ● ● ● ● ●	● ● ● ● ● ●

Colours: black ~ RAL 9005, blue ~ RAL 5015, red ~ RAL 3000, white ~ RAL 9010, yellow ~ RAL 1037, natural, green transparent – more colours available on request