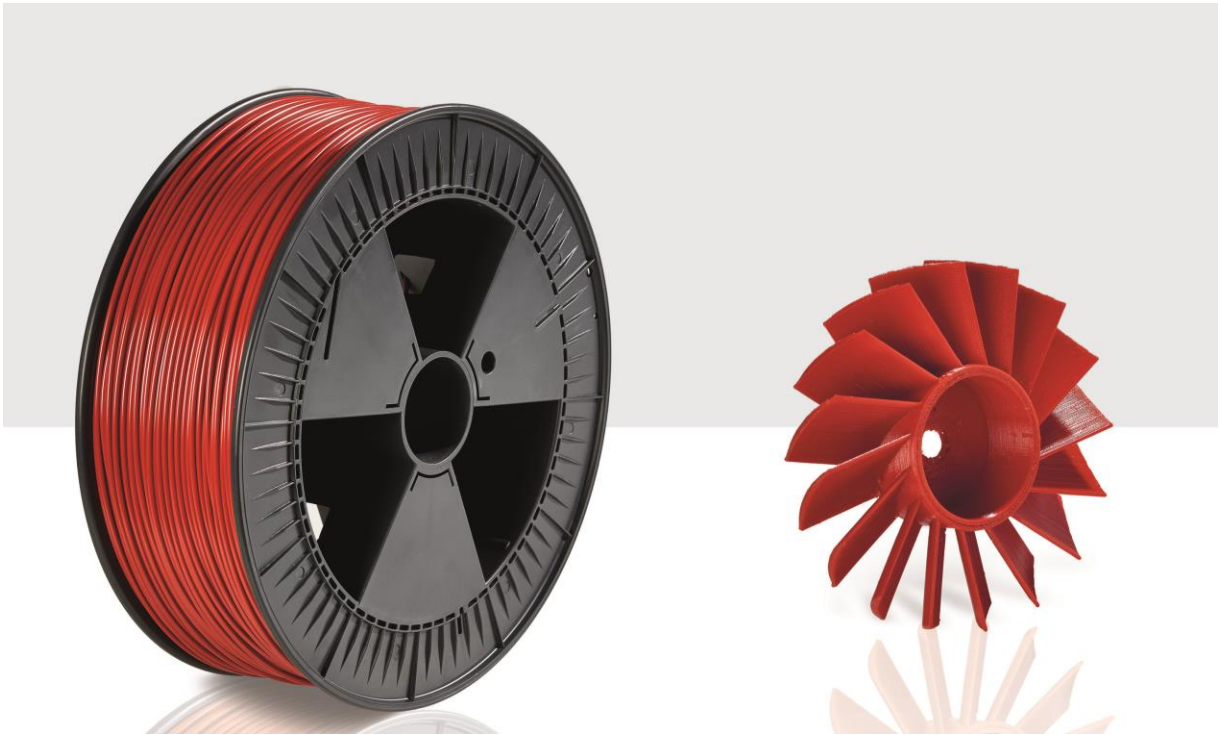


FIL-A-GEHR®

Filaments for professional 3D printing



FIL-A-GEHR® for precise, failure-free 3D printing with excellent mechanical properties.

- » Low-emission and low-odor
- » Extremely close tolerances
- » Filaments made of high-quality raw materials
- » Compatible with all common 3D printers
- » Shrinkage-free
- » Good layer adhesion
- » Optimal flow behavior while printing
- » Carefully spooled and packed in easy to use re-sealable aluminium-laminated zip bags

FIL-A-GEHR® PRODUCT RANGE

FIL-A-GEHR ABS®

a high-quality thermoplastic polymer with excellent mechanical properties. After treatment or surface treatment can easily be applied to components made of FIL-A-GEHR ABS®.

The components are specifically suitable for the production of small or mid-sized objects, functional prototypes or parts and thermostable items e.g. model making.

FIL-A-GEHR PLA®

is made from NatureWorks and consists of high-quality Ingeo™ biopolymer. Reduced energy consumption and low nozzle temperatures while printing are advantageous properties of this material. Furthermore, it can be printed without a heated bed. Typical Applications: Very large products or dimensionally stable products e.g. molds for cast-bronze or temporary parts

Recommended by  NatureWorks

FIL-A-GEHR PC/ABS®

combines the properties of two exceptional FDM thermoplastics: the high impact strength and heat deflection temperature of PC with the high toughness at low temperatures and the good processability of ABS. The surface is ideal for painting and adhesive bonding.

Properties

- » Low-emission and low-odor
- » FIL-A-GEHR ABS® compliant to European Toy Safety Standard 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)

Properties

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

Properties

- » Optimized flow behaviour
- » Heat deflection temperature between 110 °C and 135 °C
- » High notch impact strength values over wide temperature range
- » High dimensional stability
- » Low susceptibility to warping



FIL-A-GEHR PPA® (NYLON)

is a particularly stiff and hard material. Thanks to its high levels of stability and hardness and its high continuous operating temperature, the material is mainly used as metal replacement, e.g. in the engine compartment or fittings for water pipes and water meter housings. The stiff material is particularly suited for 3D printing; different from carbon fibre filled materials, the print nozzles do not wear. Material warpage is minimal in 3D printing.

FIL-A-GEHR PA12® (NYLON)

Compared to other polyamides, FIL-A-GEHR PA12® (Nylon) has a low moisture absorption which is beneficial for failure-free 3D printing. The excellent chemical resistance, in particular against fuels and antifreeze agents, in combination with the high impact strength of the material, justifies the material's application e.g. in fuel or coolant pipes in the automotive industry.

FIL-A-GEHR PEEK®

Polyetheretherketone ranks among the high performance thermoplastics thanks to its high melting point of 343 °C and its maximum continuous operating temperature of 260 °C. Its particular chemical structure makes PEEK largely stable against thermal and chemical damage and permits its usage inside the body. In case of fire, the smoke development of PEEK is the lowest of all thermoplastics; the material is therefore used in aviation. FIL-A-GEHR PEEK is an experimental filament with a processing temperature of 375 °C in the heated chamber (180 °C). The material is specifically apt for use on 3D printers.

Properties

- » 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

Properties

- » Excellent chemical resistance, in particular against fuels and antifreeze agents
- » Low moisture absorption
- » high degree of dimensional stability
- » Low wear / excellent sliding friction
- » High impact strength
- » High continuous operating temperature of 85 °C
- » Low susceptibility to distortion

Properties

- » High stiffness, elastic modulus 3830 MPa
- » Resistance against many chemicals
- » Maximum continuous operating temperature 260 °C
- » Print temperature 375 °C
- » Chamber temperature 180 °C



FIL-A-GEHR® PRODUCT RANGE

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

For more information visit www.filagehr.de



GEHR, Specialist In Plastics – Premium Quality Since 1932

We extrude thermoplastic semi-finished materials and rank amongst the global leading producers of technical semi-finished products. FIL-A-GEHR® expands our product range with plastic filaments for 3D printers. GEHR produces the filaments in Mannheim and has been representing innovation and premium quality since 1932.