

FIL-A-GEHR®

Filaments for professional 3D printing



 **PLA-ECO**

ECO-FIL-A-GEHR PLA® is made from NatureWorks Ingeo™ biopolymer for precise, failure-free and extreme robust / stable 3D printing.

FEATURES **FIL-A-GEHR**

- » 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

PRODUCT RANGE

diameter	1 kg spool (~2,2 lbs)
1.75 mm 0.07"	⊙
2.85 mm 0.11"	⊙

Colours: ⊙ natural



DISTINCTIVE FEATURES **ECO-FIL-A-GEHR PLA®**

- » Filaments made of high-quality and renewable raw materials
- » Shrinkage-free
- » No heated printbed required
- » High dimensional stability
- » High stiffness / high modulus of elasticity
- » Pressure nozzle temperature 220°C, printing plate temperature 65°C

TYPICAL APPLICATIONS

- » High precision temporary parts
- » Dimensionally stable products e.g. molds for cast-bronze
- » Very large products

RECYCLING

Box and spools are made of pure materials (PAP20 and PC) and are therefore recyclable through correct disposal.



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.

TECHNICAL DATA ECO-FIL-A-GEHR PLA®

Properties	Parameters	Units	Values
General Properties			
Specific gravity (ρ)	ISO 1183	g/cm ³	1.24
Water absorption	ISO 62	%	-
Moisture	ISO 62	%	0.2

Mechanical Properties			
Tensile strength at yield (σ_S)	ISO 527	MPa	50
Elongation at yield (ε_S)	ISO 527	%	5
Tensile strength at break (σ_R)	ISO 527	MPa	56
Elongation at break (ε_R)	ISO 527	%	8
Impact strength (a_n)	ISO 179	kJ/m ²	-
Notch impact strength (a_k)	ISO 179	kJ/m ²	3.4
Ball indentation (H_k) / Rockwell hardness	ISO 2039-1	N/mm ²	-
Shore-D	ISO 868		-
Flexural strength ($\sigma_{B, 3,5\%}$)	ISO 178	MPa	55
Modulus of elasticity (E_t)	ISO 527	MPa	3380

Thermal Properties			
Vicat-softening point (VST/B/50)	ISO 306	°C	-
Heat deflection temperature (HDT/B)	ISO 75	°C	80
Glass transition temperature (T_G)	ISO 3146	°C	55
Melting temperature (T_m)	ISO 3146	°C	210

Printing Properties			
Pressure nozzle temperature		°C	210-225
Printing plate temperature		°C	50
Build chamber temperature		°C	-
Nozzle diameter		mm	0.4
Print speed		mm/s	55
Fan speed		%	100
Predrying temperature		°C	-
Predrying time		h	-

All properties are measured under laboratory conditions using the analytical method shown. The limits in these specifications apply only to data obtained using the specified test methods. Different analysis methods or analysis conditions can lead to different values.