PLASTICS ENGINEERED BY GEHR

FIL-A-GEHR®

Filaments for professional 3D printing

ABS

GEHR GmbH Casterfeldstraße 172 / D - 68219 Mannheim / T: +49 - 621/87 89 – 164 / 3D@gehr.de / www.filagehr.de

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

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: ● black ● blue ● red ○ white ● yellow ● green transparent

DISTINCTIVE FEATURES FIL-A-GEHR ABS®

» Compliant to European Toy Safety Norm EN71-3
» Raw material has food contact and medical approval
» High stability and impact strength
» Heat resistant up to approx. 100 °C
» Easy post-processing / surface treatment
» Pressure nozzle temperature 240-260°C, printing plate temperature >100°C

TYPICAL APPLICATIONS

» Thermostable parts, e.g. model making
» Functional prototypes
» Small and medium-sized objects

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.

GEHR GmbH Casterfeldstraße 172 / D - 68219 Mannheim / T: +49 - 621/87 89 – 164 / 3D@gehr.de / www.filagehr.de

TECHNISCHE DATEN FIL-A-GEHR ABS®

Properties	Parameters	Units	Values
General Properties			
Specific gravity (ρ)	ISO 1183	g/cm³	1.29
Water absorption	ISO 62	%	0.12
Moisture	ISO 62	%	0.3
Mechanical Properties			
Tensile strength at yield (σ_S)	ISO 527	MPa	53
Elongation at yield (ε_S)	ISO 527	%	4
Tensile strength at break (σ_R)	ISO 527	MPa	53
Elongation at break (ε_R)	ISO 527	%	4
Impact strength (a_n)	ISO 179	kJ/m²	no break
Notch impact strength (a_k)	ISO 179	kJ/m²	4.5
Ball indentation (H_k) / Rockwell hardness	ISO 2039-1	N/mm²	-
Shore-D	ISO 868		-
Flexural strength ($\sigma_{B\ 3,5\ \%}$)	ISO 178	MPa	71
Modulus of elasticity (E_t)	ISO 527	MPa	3000
Thermal Properties			
Vicat-softening point (VST/B/50)	ISO 306	°C	-
Heat deflection temperature (HDT/B)	ISO 75	°C	68
Glass transition temperature (T_G)	ISO 3146	°C	80
Melting temperature (T_m)	ISO 3146	°C	-
Printing Properties			
Pressure nozzle temperature		°C	240-260
Printing plate temperature		°C	>100
Build chamber temperature	Recommended enclosed	°C	-
Nozzle diameter		mm	0.4
Print speed		mm/s	45
Fan speed		%	0
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.