

FIL-A-GEHR®

Filaments for professional 3D printing



 **ABS-ESD**

FIL-A-GEHR® ABS-ESD provides reliable electrostatic discharge protection while maintaining strong impact resistance and durability.

FEATURES OF FILAMENTS MADE BY 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)	2kg / 2.02kg spool
1.75 mm	●	●

Colours: ● black



DISTINCTIVE FEATURES FIL-A-GEHR® ABS-ESD

- » High stability and impact strength
- » Heat resistant up to approx. 100°C
- » Antistatic properties
- » High-quality 3D printing properties
- » Pressure nozzle temperature 260-270°C,
printing plate temperature 90°C
- » Printing room temperatur 60°C

TYPICAL APPLICATIONS

- » Semicon industry
- » Powder processing
- » Electronic parts



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 FIL-A-GEHR® ABS-ESD

Properties	Parameters	Units	Values
General Properties			
Specific gravity (ρ)	ISO 1183	g/cm ³	1.10
Water absorption	ISO 62	%	0.95
Moisture	ISO 62	%	0.25
Maximum permissible service temperature	UL746B	°C	80
Surface resistance	DIN EN 62631	Ohm	10 ⁷ -10 ⁹

Mechanical Properties (XY Flat)			
Tensile strength at yield (σ_S)	ISO 527	MPa	21.3
Elongation at yield (ε_S)	ISO 527	%	4
Tensile strength at break (σ_R)	ISO 527	MPa	20.1
Elongation at break (ε_R)	ISO 527	%	4.5
Impact strength (a_n)	ISO 179	kJ/m ²	11.9
Notch impact strength (a_k)	ISO 179	kJ/m ²	-
Ball indentation (H_k) / Rockwell hardness	ISO 2039-1	N/mm ²	-
Shore-D	ISO 868		68
Flexural strength ($\sigma_{B\ 3.5\ %}$)	ISO 178	MPa	-
Modulus of elasticity (E_t)	ISO 527	MPa	1370

Thermal Properties			
Vicat-softening point (VST/B/50)	ISO 306	°C	70.1
Heat deflection temperature (HDT/B)	ISO 75	°C	94.5
Coef. of linear thermal expansion (α)	ISO 11359	°C ⁻¹ *10 ⁻⁴	0.8-1.1
Thermal conductivity at 20 °C (λ)	ISO 22007-4	W/(m*K)	-
Glass transition temperature (T_G)	ISO 3146	°C	107
Melting temperature (T_m)	ISO 3146	°C	-

Printing Properties			
Pressure nozzle temperature		°C	260-270
Printing plate temperature		°C	90
Build chamber temperature		°C	60
Nozzle diameter		mm	0.4
Print speed		mm/s	60
Fan speed	(activated on layer 4)	%	80
Predrying temperature		°C	80
Predrying time		h	4

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.