



3D Industrie

Additive Manufacturing
by Maria & Johannes Lutz



ABS FILSHAPER

About ABS

ABS (Acrylonitrile – Butadiene – Styrene) is an amorphous polymer obtained by emulsion polymerization.

Prints made of ABS are characterized by high resistance to impact loads and chemicals. ABS models have very good thermal insulation properties and do not undergo deformation when the temperature changes. Objects printed in ABS can easily be glued, sanded, polished and mechanically machined to obtain the desired shape and surface.

ABS FILSHAPER is the ideal material for creating conceptual models and actual usable parts. Ideal for prototypes, instruments, enclosures, tools, and production components. Excellent printing material for most home and professional 3D printers operating in FDM technology.

Measurements & Tolerance

Size	Diameter tolerance	Roundness
1,75 mm Filament	+/- 0,05mm	99%

Physical attributes

Description	Value	Test method
Density	1.05 g/cm ³	ISO 1183/B

Mechanical attributes

Tensile Modulus	2500 MPa	ISO 527
Flexural Modulus	2400 MPa	ISO 178
Impact strenght Notched Izod	17 KJ /m ²	ISO 180/A
Hardness		
Shore D	100	ISO 868

Printer settings

Measurements & Tolerance

Description	Value
Printer nose temperature	220-260°C
Heated platform temperature	100°C

Processing Guide (Injection Molding)

Processing Parameters Density	Unit	Value
Drying Temperature	hrs	80
Drying Time	%	2 ~ 4
Minimum Moisture Content	°C	0.01
Melt Temperature	°C	210 ~ 240
Cylinder Temperature	°C	180 ~ 200
	°C	190 ~ 210
	°C	200 ~ 220
Nozzle Temperature	°C	200 ~ 230
Mold Temperature	°C	40 ~ 70
Back Pressure	kg/cm	300 ~ 600
Screw Speed	rpm	30 ~ 60

When printing in ABS it is very important to use a 3D Printer with a heated table and closed chamber.