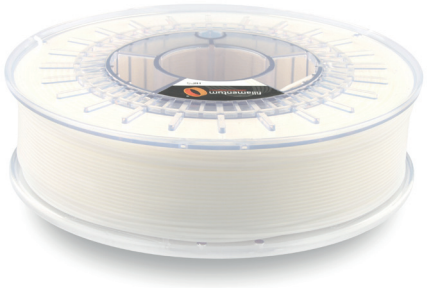
Datasheet

HIPS Extrafill

Description:

HIPS is one of the new materials, which began to be used for 3D printing. It is one of the most commonly used polymeric materials in the world. Due to its physical properties - strength and heat resistance - is widely used in the packaging industry, food industry etc.

HIPS filament is made of a polymer which has very similar properties to ABS with regards to rigidity and impact resistance. HIPS is useful for printing support parts that will dissolve in Lemonesol and for that reason is HIPS very interesting, in combination with ABS, for the creation of models.



Physical properties	Typical Value	Test Method	Test Condition
Material density	1,03 g/cm³	ASTM D792	
Melt volume index	7,8 cm³/10 min	ASTM D1238	200 °C, 5,0 kg
	77,6 cm³/10 min	ASTM D1238	220 °C, 10,0 kg
	18,5 cm³/10 min	ASTM D1238	230 °C, 3,8 kg
Diameter tolerance	± 0,05 mm		
Weight	750 g of filament (+ 250 g spool)		

Mechanical properties	Typical Value	Test Method	Test Condition
Tensile strength	26,5 MPa	ASTM D638	50 mm/min
Tensile modulus	1770 MPa	ASTM D638	1 mm/min
Elongation at break	59 %	ASTM D638	50 mm/min
Flexural strength	42,2 MPa	ASTM D790	15 mm/min
Flexural modulus	2160 MPa	ASTM D790	15 mm/min
Izod impact strength	59 J/m	ASTM D256	-30 °C, notched
	49 J/m	ASTM D256	-30 °C, notched
	120 J/m	ASTM D256	23 °C, notched
	78 J/m	ASTM D256	23 °C, notched
Hardness	99	ASTM D785	Rockwell Hardness (R-Scale)

Thermal properties	Typical Value	Test Method	Test Condition
Heat distortion temperature	80 °C	ASTM D648	1,8 MPa
	88 °C	ASTM D648	0,45 MPa
Vicat softening temperature	87 °C	ASTM D1525	50 °C/h, 5 kg
Flammability	HB	UL-94	

Printing Properties	Typical Value	Test Method	Test Condition
Print temperature	245–250 °C		
Hot pad	90–100 °C		
Speed of printing	30–40 mm/s		
Mold shrinkage	0,4–0,8 %		

Electrical properties	Typical Value	Test Method	Test Condition
Electrical resistivity	10^{14} Ω • cm	ASTM D257	
Dielectric strength	44 kV/mm	ASTM D149	

Workability of 3D printing filament is at least 12 months from delivery.
The information was processed with the best knowledge of the manufacturer and it is for information only.

Fillamentum
nám. Míru 1217, 768 24 Hulín
Czech Republic

(+420) 725 463 731
helpdesk@fillamentum.com
www.fillamentum.com