

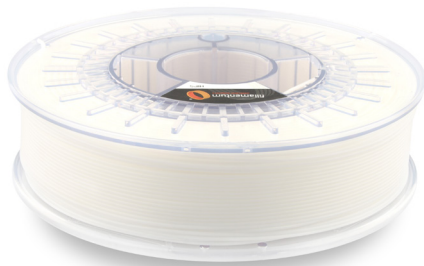
HIPS Extrafill

Description:

The filament made from HIPS may offer good mechanical properties, such as strength, impact resistance, toughness or heat resistance. Thanks to its structure it is widely used for the printing of support parts, that may be dissolved in Lemonesol.

The material complies with the requirements for materials intended to come into contact with food. HIPS may be used for the food and packaging industry.

During printing of HIPS filament small quantities of styrene is released into the atmosphere.



Physical properties	Typical Value	Test Method	Test Condition
Material density	1,05 g/cm ³	ISO 1183	
Melt volume index	9,5 cm ³ /10 min	ISO 1133	200 °C, 5,0 kg
Moisture adsorption	<0,1 %		23 °C, 50 % r. h.
Water adsorption	<0,1 %	ISO 62	Method A
Diameter tolerance	± 0,05 mm		
Weight	750 g of filament (+ 250 g spool)		

Mechanical properties	Typical Value	Test Method	Test Condition
Tensile strength	26 MPa	ISO 527	
Tensile modulus	2000 MPa	ISO 527	
Elongation at break	40 %	ISO 527	
Flexural strength	40 MPa	ISO 178	
Flexural modulus	2100 MPa	ISO 178	
Charpy impact strength	no break	ISO 179/1eU	23 °C
	130 kJ/m ²	ISO 179/1eU	-30 °C
Izod impact strength	180 J/m	ASTM D256-A	23 °C, notched
Ball indentation hardness	74 MPa	ISO 2039-1	H 132/30, H 358/30

Thermal properties	Typical Value	Test Method	Test Condition
Heat distortion temperature	85 °C	ISO 75	1,8 MPa
	89 °C	ISO 75	0,45 MPa
Vicat softening temperature	88,5 °C	ISO 306	50 °C/h, 50 N
	98 °C	ISO 306	120 °C/h, 10 N

Electrical Properties	Typical Value	Test Method	Test Condition
Dielectric constant	2,50	IEC 250	
Volume resistivity	>10 ¹⁶ Ω cm	IEC 93	
Surface resistivity	>10 ¹³ Ω	IEC 93	
Dielectric strength	155 kV/mm	IEC 243/1	

Printing properties	Typical Value	Test Method	Test Condition
Working temperature	230-250 °C		
Hot pad	90-100 °C		

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.