

HIPS

SMARTFIL HIPS or High Impact Polystyrene, ideal for printing very resistant parts with excellent mechanical properties.

It has similar characteristics to ABS, although it stands out for its high impact resistance. It can be sanded and painted with acrylic paints. Ideal as a support material, as it dissolves quickly with D-Limonene.



Impact resistance



Machinable



Soluble



Food Approved

	VALUES	UNIT OF MEASUREMENT	STANDARD
PHYSICAL PROPERTIES			
Chemical name	High impact polystyrene		
Density	1,05	g/cm ³	ASTM D792
MECHANICAL PROPERTIES ¹			
	XY PLANE	ZX PLANE	
Tensile strength	12,9	9,3	MPa
Traction module	1208,9	34867,7	MPa
Flexion strength	34,3	18	MPa
Flexion module	1598,9	1490,3	MPa
Elongation at maximum effort	0,7	0,03	%
Elongation by traction at break	29,1	0,03	%
Elongation by flexion at break	16,6	4,6	%
Charpy Impact Force (non-notched)	72,8	3	kJ/m ²
Hardness	80,6		Shore D

⁽¹⁾ Values obtained on printed specimens, nozzle 0,4 mm, rectilinear infill 100%, layer height 0,2 mm. For more information please contact us by email at info@smartmaterials.com or visit our website www.smartmaterials3d.com

THERMAL PROPERTIES			
Glass transition temperature (Tg)	92	°C	ISO 11357
VICAT B (50 N 50°C/h)	85	°C	ISO 306
HDT B (0,45 MPa)	79	°C	ISO 75
PRINTING PROPERTIES			
Printing temperature	230 – 250	°C	
Bed temperature	90 – 110	°C	
Layer fan	0 – 20	%	
Material flow	100	%	
Layer height	≥ 0,1	mm	
Nozzle recommendations	≥ 0,2	mm	
Print speed	30 – 50	mm/s	

SIZE	NET WEIGHT	GROSS WEIGHT	DIAMETER	COLOR	PACKAGING
M	750 g	975 g	1,75 mm/2,85 mm	White, black	SmartBag, security seal, desiccant bag.

NOTICE: The information provided in the data sheets is intended for reference only. It should not be used as design or quality control values. Actual values may differ significantly depending on printing conditions. The final performance of printed components not only depends on materials, design and printing conditions are also important.