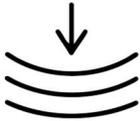


## FLEX FOAM

SMARTFIL Flex Foam is a thermoplastic elastomer specially formulated to expand depending on the printing temperature. Its adjustable flow allows the creation of lighter parts without losing shape or volume, while maintaining flexibility and elasticity. Its balanced hardness makes it compatible with a wide range of 3D printers.



	VALUES		UNIT OF MEASUREMENT	STANDARD	
<b>PHYSICAL PROPERTIES</b>					
Chemical name	Thermoplastic polyurethane expandable				
Density	Variable		g/cm <sup>3</sup>	ASTM D792	
<b>MECHANICAL PROPERTIES <sup>1</sup></b>					
	XY PLANE	ZX PLANE			
Tensile strength	-	-	MPa	ISO 527	
Traction module	-	-	MPa	ISO 527	
Flexion strength	-	-	MPa	ISO 178	
Flexion module	-	-	MPa	ISO 178	
Elongation at maximum effort	-	-	%	ISO 527	
Stretch traction at break	-	-	%	ISO 527	
Elongation by flexion at break	-	-	%	ISO 178	
Charpy Impact Force (non-notched)	-	-	kJ/m <sup>2</sup>	ISO 179	
Hardness	-	-	Shore A	ISO 7619-1	
<sup>1</sup> 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 <a href="mailto:info@smartmaterials.com">info@smartmaterials.com</a> or visit our website <a href="http://www.smartmaterials3d.com">www.smartmaterials3d.com</a>					
<b>THERMAL PROPERTIES</b>					
Glass transition temperature (T <sub>g</sub> )	-		°C	ISO 11357	
VICAT B (50 N 50°C/h)	-		°C	ISO 306	
HDT B (0,45 MPa)	-		°C	ISO 75	
<b>PRINTING PROPERTIES</b>					
Printing temperature	200 – 250		°C		
Bed temperature	0 – 50		°C		
Layer fan	60 – 80		%		
Material flow	30 – 100		%		
Layer height	≥ 0,2		mm		
Nozzle recommendations	≥ 0,2		mm		
Print speed	20 – 30		mm/s		
<b>SIZE      NET WEIGHT      GROSS WEIGHT      DIAMETROS      COLOUR      PACKAGING</b>					
M	750 g	975 g	1,75 mm	Black, white	Cardboard Box, dissecant 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.