

R-PETG

Smartfil R-PETG is a thermoplastic filament made from post-industrial or post-consumer recycled PETG, specially designed for 3D printing. It retains the fundamental properties of virgin PETG, offering low shrinkage, excellent layer adhesion, and ease of printing even on desktop 3D printers.

It has high chemical and thermal resistance, making it suitable for functional prototypes, mechanical components, and parts that require durability and dimensional stability. Being made from recycled PETG, it represents a sustainable alternative that contributes to the circular economy and reduces environmental impact.



Chemical resistance



Allow for all printers

	VALUES	UNIT OF MEASURE	STANDARD		
PHYSICAL PROPERTIES					
Chemical name	Recycled polyethylene glycol terephthalate				
Density	1,27	g/cm ³	ASTM D792		
MECHANICAL PROPERTIES ¹					
	XY PLANE	ZX PLANE			
Tensile strength	45	-	MPa		
Tensile module	2400	-	MPa		
Flexural strength	-	-	MPa		
Flexural module	-	-	MPa		
Elongation at maximum stress	-	-	%		
Tensile elongation at break	20	-	%		
Flexural elongation at break	-	-	%		
Izod Impact Force (23 ^o)	70	-	J/m		
Shore	-	-	Shore D		
			ISO 7619-1		
THERMAL PROPERTIES					
Glass transition temperature (T _g)	-	°C	ISO 11357		
VICAT B (50 N 50°C/h)	-	°C	ISO 306		
HDT B (0,45 MPa)	72	°C	ISO 75		
PRINTING PROPERTIES					
Printing temperature	230 – 250	°C			
Bed temperature	70 – 80	°C			
Layer fan	60 – 80	%			
Material flow	100	%			
Layer height	≥ 0,2	mm			
Nozzle recommendations	≥ 0,4	mm			
Printing speed	40 – 300	mm/s			
SIZE					
NET WEIGHT	GROSS WEIGHT	DIAMETER	COLOUR	PACKAGING	
L	1000 g	1,106 g	1,75 mm	Several	SmartBag, security seal, dissencant bag.

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

NOTICE: The information provided in the data sheets is intended for reference purposes 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 depends not only on the materials but also on design and printing conditions.