TECHNICAL DATA SHEET

VERSION 1.0
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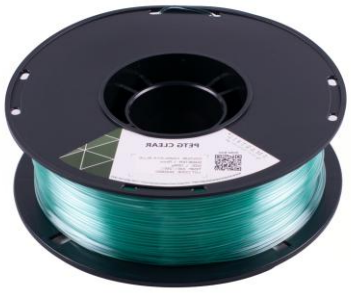
SMARTFIL
by smart materials 3D

PETG CLEAR

PETG Clear is the ideal choice for those seeking 3D printed parts with a glossy, clean, and highly translucent finish. Its crystal-clear appearance allows for the creation of models with high visual impact, while its excellent mechanical properties provide strength, durability, and dimensional stability.



Thanks to its balance between aesthetics and functionality, it is perfect for prototypes, displays, housings, decorative elements, and any application where transparency and surface finish make the difference.

Chemical resistance

Allow for all printers

	VALUES		UNIT OF MEASUREMENT	STANDARD
PHYSICAL PROPERTIES				
Chemical name	Polyethylene glycol terephthalate			
Density	1,29		g/cm^3	ASTM D792
MECHANICAL PROPERTIES [1]	XY PLANE	ZX PLANE		
Tensile strength	53	-	MPa	ISO 527-2
Traction module	3000	-	MPa	ISO 527-2
Flexion strength	171	-	MPa	ISO 178
Flexion module	2040	-	MPa	ISO 178
Elongation at maximum effort	4	-	%	ISO 527-2
Elongation by traction at break	4	-	%	ISO 527-2
Elongation by flexion at break	-	-	%	ISO 178
Charpy Impact Force (non-notched)	4,5	-	kJ/m2	ISO 180
Hardness	70	-	Shore D	ASTM D2240

[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)	80	˚C	ASTM D3418
VICAT B (50 N 50°C/h)	78	˚C	ISO 306
HDT B (0,45 MPa)	68	˚C	ISO 75-2
HDT B (1,8 MPa)	62	˚C	ISO 75-2
PRINTING PROPERTIES			
Printing temperature	210 – 235	˚C	
Bed temperature	50 – 80	˚C	
Layer fan	0 – 100	%	
Material flow	95	%	
Layer height	≥ 0,1	mm	
Nozzle recommendations	≥ 0,2	mm	
Print speed	30 – 70	mm/s	

SIZE	NET WEIGHT	GROSS WEIGHT	DIAMETER	COLOR	PACKAGING
M	750 g	975 g	1,75 mm	Several	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.