

PET

Technical Data Sheet

PET is a material with heat resistance, high toughness and excellent printing properties. Compared with PLA, heat resistance is about 75 ; Compared with PETG, the tensile strength and bending strength are better, the printing temperature is low, the printing part is less drawn, the dimensional accuracy is high.

Material Status	Mass Production		
Characteristics	<ul style="list-style-type: none"> Heat resistance High toughness Low Printing Temperature 	<ul style="list-style-type: none"> High Speed Prining 	
Applications	<ul style="list-style-type: none"> Aerospace 	<ul style="list-style-type: none"> Automotive 	<ul style="list-style-type: none"> Industrial applications
Form	<ul style="list-style-type: none"> Filament 		
Processing method	<ul style="list-style-type: none"> 3D Print, FDM Print 		

	testing method	Typical value	
Physical Properties			
Density	GB/T 1033	1.07	g/cm ³
Melt Flow Index	GB/T 3682	13.2	(220°C/10KG)
Mechanical Properties			
TensileStrength(Z)	GB/T 1040	35-45	MPa
ElongationatBreak(Z)	GB/T 1040	4-6	%
FlexuralStrength(X-Y)	GB/T 9341	90-100	MPa
FlexuralModulus(X-Y)	GB/T 9341	2100-2500	MPa
IZODImpactStrength(X-Y)	GB/T 1843	3-5	kJ/m ²
Thermal Properties			
Heat distortion Temperature	GB/T 1634	60-80°C	(0.45Mpa)
Continuous Service Temperature	IEC 60216	N/A	
Maximum (short term) Use Temperature		N/A	
Electrical Properties			
Insulation Resistance	DIN IEC 60167	N/A	
Surface Resistance	DIN IEC 60093	N/A	

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Recommended printing parameters

Extruder Temperature	265 - 280°C
Build Platform Temperature	80-95°C
Fan Speed	10%
Printing Speed	40-300mm/s

Based on Bambu P1S 0.4 mm nozzle and Orcaslicer2.1.0 Beta. Printing conditions may vary with different

nozzle diameters Drying Recommendations

N/A

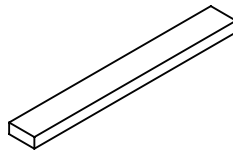
Precautions:

When slicing, it is best to turn on the Z seam alignment and starting point alignment functions, turn off the Z-axis lift and exit, avoid passing through the shell when idling, optimize the slicing printing path, and appropriately reduce the printing speed to achieve the best printing effect.

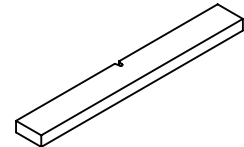
Mechanical Properties



Tensile testing specimen GB/T 1040



Flexural testing specimen GB/T 9341



Impact testing specimen GB/T 1043

The physical properties, mechanical properties, thermal properties, and electrical properties of the filament are obtained based on the injection molding spline test.

Print test condition:

Extruder Temperature	260°C
Build Platform Temperature	90°C
Outline/Perimeter Shells	2
Top/Bottom Layers	3
Infill Percentage	105%
Fan speed	10%
Maximum volumetric flow rate	10m ³ /s

Based on Bambu P1S 0.4 mm nozzle and Orcaslicer2.1.0 Beta.

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