PET-Basic

Technical Data Sheet

PET-Basic is a recyclable filament specially designed for FDM printing,with its high toughness,impact resistance and stable printing perfor-mance,it has become an ideal choice for household goods and manu-facturing products.

Basic Information

Characteristics	• Transparency • High toughness • Chemical resistance	• Waterproofness
Applications	• Cultural and Creatice Works • Electronics and Electrical Appliances	• Architectural decoration
Forming Method	• Filament	
Processing Method	• 3D Printing	

Physical Properties	Testing Method	Data
Density	GB/T 1033	1.28 g/cm3
Melt Flow Index	GB/T 3682	28.75 （250℃/2.16kg）

Thermal Properties	Testing Method	Data
Heat Distortion Temperature	GB/T 1634	70 ℃ (0.45Mpa)
Glass Transition Temperature		N/A
Continuous Service Temperature	IEC 60216	N/A
Maximum (short term) Use Temperature		N/A

Electrical Properties	Testing Method	Data
Insulation Resistance	DIN IEC 60167	N/A
Surface Resistance	DIN IEC 60093	N/A

15AB, Microsoft Ketong Building, No. 55, Gaoxin South Nine Road, Yuehai Street, Nanshan District, Shenzhen, China
Tel: (086)-0755-86581960 Fax: (086)-0755-26031982 Email: bright@brightcn.net
www.esun3d.com

Mechanical Properties	Testing Method	Data
Tensile Strength (X-Y)	GB/T 1040	50.1 Mpa
Tensile Strength (Z)	GB/T 1040	30.92 MPa
Elongation at Break (X-Y)	GB/T 1040	3.62 %
Elongation at Break (Z)	GB/T 1040	2.59 %
Flexural Strength (X-Y)	GB/T 9341	102.8 MPa
Flexural Strength (Z)	GB/T 9341	99.1 Mpa
Flexural Modulus (X-Y)	GB/T 9341	2694.93 MPa
Flexural Modulus (Z)	GB/T 9341	2620.73 Mpa
IZOD Impact Strength (X-Y)	GB/T 1843	2.12 KJ/m^2
IZOD Impact Strength (Z)	GB/T 1843	2.07KJ/m^2

Chemical Properties	Data
Acid and Alkali Resistance	N/A
Grease Resistance	N/A
UV Resistance	YES
Water Repellency	YES

Recommended Printing Parameters	Data
Drying Preparation	60℃ > 8H
Nozzle Size	0.2,0.4,0.6,0.8mm
Nozzle Temperature	250-280℃
Build Platform Type	PEI
Build Platform Temperature	70-90℃
Fan Speed	40-70%
Printing Speed	< 250mm/s

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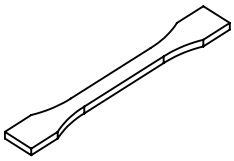
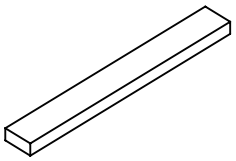
Printing Tips

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.

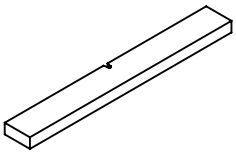
Test Conditions of Mechanical Properties



Tensile testing specimen GB/T 1040



Flexural testing specimen GB/T 9341



Impact testing specimen GB/T 1843

The performance of the filament is evaluated based on standard samples printed by eSUN, while the actual printing performance is influenced by various factors such as printer type, printing parameters, and print environment.

Printing Test Conditions:

Extruder Temperature	255℃
Build Platform Temperature	70℃
Outer Layer Number	2
Top/Bottom Layer Number	3
Infill Density	100%
Fan Speed	100%

*Based on Bambu P1S 0.4 mm nozzle and Orcaslicer 2.1.0 Beta.

Notice

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