PLA Basic

Technical Data Sheet

A low-cost basic printing consumable based on modified PLA. While maintaining its environmental characteristics, the added special materials enhances the fluidity and fast printing performance of PLA-basic, allowing its maximum volume flow rate to reach about 30mm³/s under the printing conditions of a Bambu P1 series machine with 0.4mm nozzle. PLA-basic material is easy to print, does not produce irritating odor, it is not easy to draw, the finished product does not warp, and has good molding quality. It is a cost-effective choice among 3D fast printing consumables.

Material Status	Mass Production
Characteristics	• High speed printing • Cost-effective • Easy to print
Applications	• Decorations • Early Concept Model • Rapid Prototype Design
Form	• Filament
Processing method	• 3D Print, FDM Print

	testing method	Typical value	
Physical Properties			
Density	GB/T 1033	1.24	g/cm³
Melt Flow Index	GB/T 3682	3.5-4.5	(190°C/2.16kg)
Mechanical Properties			
Tensile Strength	GB/T 1040	20-30	MPa
Elongation at Break	GB/T 1040	5-10	%
Flexural Strength	GB/T 9341	101.2	MPa
Flexural Modulus	GB/T 9341	3111.8	MPa
IZOD Impact Strength	GB/T 1843	3.05	kJ/m²
Thermal Properties			
Heat distortion Temperature	GB/T 1634	50-60°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	

Wuhan University Building A403-I,A901,No.6 Yuexing 2 Road,Nanshan District,Shenzhen,Guangdong

China

Tel +86 755 86581960
fax +86 755 26031982
Email: bright@brightcn.net

www.esun3d.com

Recommended printing parameters

Extruder Temperature	210 - 230°C
Build Platform Temperature	45-60°C
Fan Speed	100%
Printing Speed	40-300mm/s

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

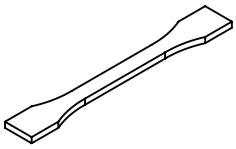
nozzle diameters Drying Recommendations

N/A

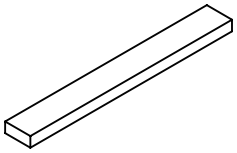
Precautions:

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.

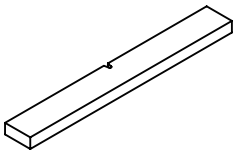
Mechanical Properties



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	220°C
Build Platform Temperature	55°C
Outline/Perimeter Shells	2
Top/Bottom Layers	3
Infill Percentage	100%
Fan speed	100%
Maximum volumetric flow rate	4mm^3/s

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

Notice

All information supplied by or on behalf of eSUN in relation to this product, whether in the nature of data, recommendations or otherwise, is supported by research and, in good faith, believed reliable, but the product is sold “as is”. eSUN assumes no liability and makes no representations or warranties, express or implied, of merchantability, fitness for a particular purpose, or of any other nature with respect to information or the product to which information refers and nothing herein waives any of the seller's conditions of sale.

Wuhan University Building A403-I,A901,No.6 Yuexing 2 Road,Nanshan District,Shenzhen,Guangdong

China

Tel +86 755 86581960
fax +86 755 26031982
Email: bright@brightcn.net

www.esun3d.com