

TPU-LW

Technical Data Sheet

The TPU material that can foam during printing can adjust the degree of foaming by adjusting the printing temperature and speed, which can bring about the effect of personalizing the strength and density of the printed product. The foaming during printing makes the surface of the model have a fine sandy texture, making layer lines less noticeable. It has good flexibility and is not easy to tear, with good resilience. As a flexible foaming material, the printed model is soft and skin-friendly, suitable for printing as flexible wearables and COSPLAY models.

Material Status	Mass Production
Characteristics	<ul style="list-style-type: none"> The maximum foam volume ratio is 172% Delicate frosted texture Easy to apply Free adjustment of strength and foaming rate Good interlayer adhesion Matte surface effect Excellent printability
Applications	<ul style="list-style-type: none"> Model plane or ship COSPLAY Wear Sporting Goods
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	1.12	g/cm ³
Melt Flow Index	GB/T 3682	5	(190°C/10KG)
Mechanical Properties			
Tensile Strength	GB/T 1040	24.5	MPa
Elongation at Break	GB/T 1040	N/A	
Flexural Strength	GB/T 9341	5.4	MPa
Flexural Modulus	GB/T 9341	113	MPa
IZOD Impact Strength	GB/T 1843	48	kJ/m ²
Thermal Properties			
Heat distortion Temperature	GB/T 1634	N/A	
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 - 270°C
Build Platform Temperature	40-60°C
Fan Speed	100%
Printing Speed	20-40mm/s

Based on Bambu P1S 0.4 mm nozzle and Orcaslicer2.10 Beta. Printing conditions may vary with different

nozzle diameters Drying Recommendations

N/A

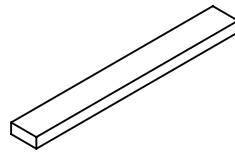
Precautions:

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.

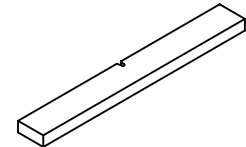
Mechanical Properties



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	230°C
Build Platform Temperature	60°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