

# ePLA-Matte

## Technical Data Sheet

ePLA-Matte is a cost-effective PLA material that is environmentally friendly and easy to print.

Compared with ABS, ePLA-Matte has higher rigidity and PC-like strength, not required a closed cavity, with low shrinkage, no warping, no cracking and it can print large-size models; compared to other materials, the support is easier to peel from the surface of the model and the contact surface is smooth and flat; there will be no irritating odor during printing, which is safe and environmentally friendly; the spool is made of PETG, ABS, PLA and other production waste and industrial waste by reusing injection molding and the outer box is made of recyclable carton, which was accordant with environmental protection concepts, making 3D printing more sustainable; matte surface effect, fine surface without layer lines; the filaments are not easy to break, long-term printing is smooth without clogging, and can be used for early concept models and rapid prototyping.

Low density, one roll ePLA-Matte filament consumables are 21% more than other matte PLA product print models.

Material Status	Mass Production
Characteristics	<ul style="list-style-type: none"> <li>• Green environmental protection</li> <li>• Cost-effective</li> <li>• High-speed printing</li> <li>• Support easy to peel off</li> <li>• Excellent printability</li> <li>• Not easy to break</li> <li>• Matte surface effect</li> <li>• Low density</li> </ul>
Applications	<ul style="list-style-type: none"> <li>• Decoration</li> <li>• Cosplay</li> </ul>
Form	<ul style="list-style-type: none"> <li>• Filament</li> </ul>
Processing method	<ul style="list-style-type: none"> <li>• 3D Print, FDM Print</li> </ul>

	Testing method	Typical value
<b>Physical Properties</b>		
Density	GB/T 1033	1.174 g/cm <sup>3</sup>
Melt Flow Index	GB/T 3682	2.1 (190°C/2.16kg)
<b>Mechanical Properties</b>		
Tensile Strength	GB/T 1040	34.56 MPa
Elongation at Break	GB/T 1040	56.1 %
Flexural Strength	GB/T 9341	41.21 MPa
Flexural Modulus	GB/T 9341	1119.41 MPa
IZOD Impact Strength	GB/T 1843	33.15 (kJ/m <sup>2</sup> )
<b>Thermal Properties</b>		
Heat distortion Temperature	GB/T 1634	51 (°C,0.45MPa)
Continuous Service Temperature	IEC 60216	N/A
Maximum (short term) Use Temperature		N/A
<b>Electrical Properties</b>		
Insulation Resistance	DIN IEC 60167	N/A
Surface Resistance	DIN IEC 60093	N/A

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### Recommended printing parameters

Extruder Temperature	190-230°C
Build Platform Temperature	45-60°C
Fan Speed	100%
Printing Speed	40 - 100mm/s

Based on 0.4 mm nozzle and Simplify 3D v.4.1.2. Printing conditions may vary with different nozzle diameters

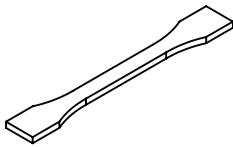
### Drying Recommendations

N/A

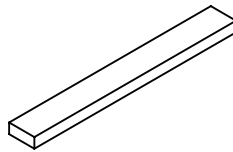
### Notes

The ePLA-Matte filament is softer than others, and the extruder's tension adjustment shall not be too tight, so as not to affect the printing.

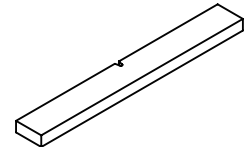
### Mechanical Properties



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	190-230°C
Build Platform Temperature	45°C
Outline/Perimeter Shells	4
Top/Bottom Layers	4
Infill Percentage	20%
Fan speed	100%
Printing speed	40mm/s

Based on 0.4 mm nozzle and Simplify 3D v.4.1.2.

### Notice

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