

PLA-Magic

Technical Data Sheet

The creative inspiration for the ePLA-Magical dual-color series comes from the galaxy ravaged by the stars, with the dark night as the background and adorned with sparkling starlight. The interplay between the two elements sparks infinite imagination and bestows a dreamlike and splendid appearance on the model. Simultaneously, the product is modified based on PLA material, combining the easy printing characteristics of PLA.

Material Status	Mass Production	
Characteristics	• Dreamlike dual color • Tough and not easily brittle	• Excellent printability
Applications	• Cultural Creativity	• Animation Industry
Form	• Filament	
Processing method	• 3D Print, FDM Print	

	testing method	Typical value	
Physical Properties			
Density	GB/T 1033	1.21	g/cm³
Mechanical Properties			
Tensile Strength	GB/T 1040	34.18	MPa
Elongation at Break	GB/T 1040	4.25	%
Flexural Strength	GB/T 9341	112	MPa
Flexural Modulus	GB/T 9341	3459	MPa
IZOD Impact Strength	GB/T 1843	2.05	kJ/m²
Thermal Properties			
Heat distortion Temperature	GB/T 1634	52.3	°C
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	190- 220°C
Build Platform Temperature	45-60°C
Fan Speed	100%
Printing Speed	40 - 300mm/s

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

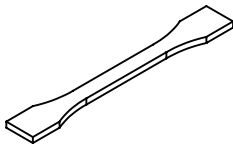
Drying Recommendations

N/A

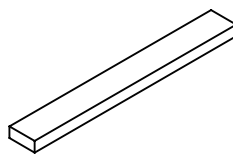
Precautions:

Reducing overhang angle structure in the model or the speed in printing to keep the cooling.

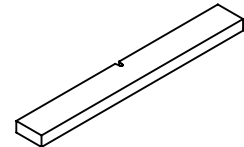
Mechanical Properties



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 line are obtained based on the injection molding spline test.

Print test condition :

Extruder Temperature	220°C
Build Platform Temperature	45°C
Outline/Perimeter Shells	2
Top/Bottom Layers	3
Infill Percentage	100%
Fan speed	100%
Printing speed	130mm/s

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

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