PLA-Rock

Technical Data Sheet

PLA rock uses a matte formula, with a dull and frosted surface texture, inspired by the texture of rocks. It employs a two-tone gradient to mimic the layered textures of rock strata, with color transitions that are full of interest. It has high line strength and is not prone to brittleness, ensuring the continuity and stability of long-term printing, and avoiding the trouble of nozzle clogging.

Basic Information

Characteristics	• Green environmental protection • Cost-e ff ective • Not easy to break	• Support easy to peel off • Excellent printability • Matte surface effect
Applications	• Decoration • Cosplay	
Forming Method	• Filament	
Processing Method	• 3D Printing	

Physical Properties	Testing Method	Data
Density	GB/T 1033	1.25 g/cm3
Melt Flow Index	GB/T 3682	8.5 (190℃/2.16kg)

Thermal Properties	Testing Method	Data
Heat Distortion Temperature	GB/T 1634	52.3 ℃ (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

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Mechanical Properties	Testing Method	Data
Tensile Strength (Z)	GB/T 1040	18.08 MPa
Elongation at Break (Z)	GB/T 1040	2.05 %
Flexural Strength (X-Y)	GB/T 9341	55.8 MPa
Flexural Modulus (X-Y)	GB/T 9341	2705.1 MPa
IZOD Impact Strength (X-Y)	GB/T 1843	4.43 KJ/m²

Chemical Properties	Data
Acid and Alkali Resistance	NO
Grease Resistance	N/A
UV Resistance	NO
Water Repellency	N/A

Recommended Printing Parameters	Data
Drying Preparation	50℃ > 8H
Nozzle Size	0.2,0.4,0.6,0.8mm
Nozzle Temperature	210-230℃
Build Platform Type	PEI
Build Platform Temperature	45-60℃
Fan Speed	100%
Printing Speed	< 250mm/s

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.

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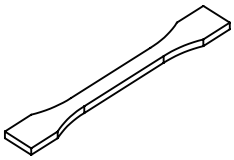
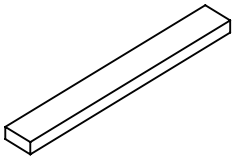
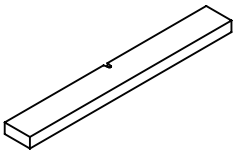
Test Conditions of Mechanical Properties



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	220℃
Build Platform Temperature	60℃
Outer Layer Number	4
Top/Bottom Layer Number	4
Infill Density	100%
Fan Speed	100%

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

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