ePLA-HS

Technical Data Sheet

Through the balance adjustment of the melt index and flow temperature, the ePLA-HS can flow smoothly in the molten state, and can be cooled faster during printing and molding. With this method, the smooth flowing without plug and fast cooling without deformation can be obtained during high-speed printing; Compared with ordinary materials, the printing speed is faster, the surface quality is higher, and the detail performance is better; Good adaptability. Through the optimization of materials, the dependence of fast printing on the cooling power of the printer is reduced, and the printability is excellent; It can be used for early conceptual model and rapid prototyping.

Material Status	Mass Production
Characteristics	• High speed printing • Smooth printed surface • Easy to print
Applications	• COSPLAY
Form	• Filament
Processing method	• 3D Print, FDM Print

	testing method	Typical value	
Physical Properties			
Density	GB/T 1033	1.21	g/cm^3
Melt Flow Index	GB/T 3682	4.5	(190°C/2.16kg)
Mechanical Properties			
Tensile Strength	GB/T 1040	59	MPa
Elongation at Break	GB/T 1040	15	%
Flexural Strength	GB/T 9341	81	MPa
Flexural Modulus	GB/T 9341	2700	MPa
IZOD Impact Strength	GB/T 1843	4.3	kJ/m^2
Thermal Properties			
Heat distortion Temperature	GB/T 1634	53	°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	

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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

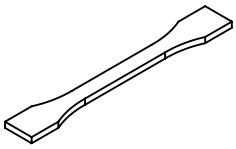
Drying Recommendations

N/A

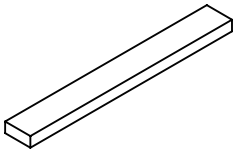
Precautions:

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.

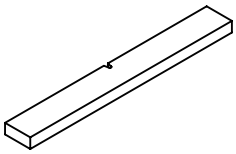
Mechanical Properties



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	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.

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