

ePA12

Technical Data Sheet

Developed based on PA12; low water absorption, the size of printed parts is less affected by humidity and temperature. ePA12 has high toughness, high impact resistance, and can be used to print durable parts; it has up to 165% elongation at break and excellent fatigue resistance; self-lubricating wear resistance, can print mechanical gears; high temperature resistance, thermal deformation, The temperature is 100°C, can be used for temperature-resistant parts; low shrinkage, not easy to warp and crack during printing.

Material Status	Mass Production		
Characteristics	<ul style="list-style-type: none"> Heat resistance High-intensity High rigidity 	<ul style="list-style-type: none"> High toughness High impact resistance Abrasive resistance 	<ul style="list-style-type: none"> High dimensional stability Matte surface effect Excellent printability
Applications	<ul style="list-style-type: none"> Machinery Automobile 	<ul style="list-style-type: none"> Aerospace Electrical and electronic 	<ul style="list-style-type: none"> Consuming products
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	1.012 g/cm ³
Melt Flow Index	GB/T 3682	55.64 (270°C/2.16kg)
Mechanical Properties		
Tensile Strength	GB/T 1040	50.81 MPa
Elongation at Break	GB/T 1040	165.41 %
Flexural Strength	GB/T 9341	47.27 MPa
Flexural Modulus	GB/T 9341	659.49 MPa
IZOD Impact Strength	GB/T 1843	10.14 kJ/m ²
Thermal Properties		
Heat distortion Temperature	GB/T 1634	100 (°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

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.net

Recommended printing parameters

Extruder Temperature	260 - 290°C
Build Platform Temperature	70-90°C
Fan Speed	0%
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

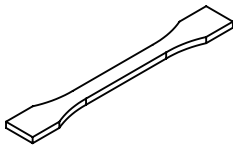
Drying Recommendations

N/A

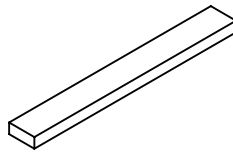
Notes

ePA12 needs to be dried (70°C/>12H) before printing to achieve the best printing effect. It is recommended to use it with the eBOX cartridge when printing.

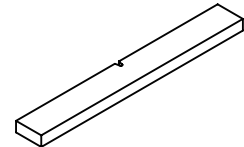
Mechanical Properties



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	240-290°C
Build Platform Temperature	80°C
Outline/Perimeter Shells	4
Top/Bottom Layers	4
Infill Percentage	20%
Fan speed	0%
Printing speed	40mm/s

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

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.