

# eTPU-95A

Technical Data Sheet

It has good flexibility with a hardness of 95A, easy to print, and can quickly print large, complex and accurate prototypes of elastomer parts; excellent elasticity, printed products are not easy to deform; good flexibility, high tear resistance and wear resistance and cut resistance, sturdiness and durability; high hardness and good resilience, can be used for insoles and other applications.

Material Status	Mass Production
Characteristics	<ul> <li>Flexible and soft</li> <li>Sturdy and durable</li> <li>High impact resistance</li> <li>High flexibility</li> </ul>
Applications	<ul> <li>Shoe material</li> <li>Machinery</li> <li>Automobile</li> <li>Electronic appliances</li> <li>Sporting products</li> <li>Medical prosthesis</li> <li>Sporting products</li> </ul>
Form	• Filament
Processing method	• 3D Print, FDM Print

	Testing method Typical value		cal value
Physical Properties			
Density	GB/T 1033	1.21	g/cm³
Melt Flow Index	GB/T 3682	1.2	(190°C/2.16kg)
Mechanical Properties			
Tensile Strength	GB/T 1040	35	MPa
Elongation at Break	GB/T 1040	≥800	%
Flexural Strength	GB/T 9341	N/A	
Flexural Modulus	GB/T 9341	N/A	
IZOD Impact Strength	GB/T 1843	N/A	
Thermal Properties			
Heat distortion Temperature	GB/T 1634	N/A	
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 220 - 250  $^{\circ}$ C Build Platform Temperature 45-60  $^{\circ}$ C Fan Speed 100% Printing Speed 20 - 50mm/s

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

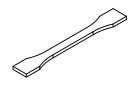
# **Drying Recommendations**

N/A

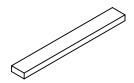
#### Notes

- 1. It is recommended to dry the printing (55°C/>4H) to achieve the best printing effect. It is recommended to use it with eBOX cartridges when printing.
- 2. It is recommended to use a short-range two-wheel reduction extruder designed for flexibility, eTPU-95A materials are usually difficult to print on a remote extrusion machine. The remote extruder can try to print at a slower speed at 20mm/s or even slower.
- 3. The nozzle may have impurities after printing for a long time. It is recommended to use it with the cleaning filament. If necessary, replace the nozzle and throat with a new one.

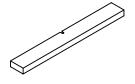
## **Mechanical Properties**







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	210-250°C	
Build Platform Temperature	60°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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