

# eASA

## Technical Data Sheet

The ASA characteristics are similar to ABS material, but it is more resistant to ultraviolet rays and harsh weather conditions. Besides, it has strong toughness, strong rigidity, and high impact resistance; The excellent weather resistance and mechanical properties make it more resistant to the effects of environmental aging. The ASA material is widely used in outdoor applications.

Material Status	Mass Production
Characteristics	<ul style="list-style-type: none"> <li>• Weather resistance</li> <li>• High toughness</li> <li>• High rigidity</li> <li>• High impact resistance</li> </ul>
Applications	<ul style="list-style-type: none"> <li>• Building materials</li> <li>• Car</li> <li>• Outdoor</li> <li>• Electronic and electrical</li> </ul>
Form	<ul style="list-style-type: none"> <li>• Filament</li> </ul>
Processing method	<ul style="list-style-type: none"> <li>• 3D Print, FDM Print</li> </ul>

	Testing method	Typical value
<b>Physical Properties</b>		
Density	GB/T 1033	1 g/cm <sup>3</sup>
Melt Flow Index	GB/T 3682	10-15 (220°C/10kg)
<b>Mechanical Properties</b>		
Tensile Strength	GB/T 1040	50 MPa
Elongation at Break	GB/T 1040	30 %
Flexural Strength	GB/T 9341	35 MPa
Flexural Modulus	GB/T 9341	4300 MPa
IZOD Impact Strength	GB/T 1843	19 kJ/m <sup>2</sup>
<b>Thermal Properties</b>		
Heat distortion Temperature	GB/T 1634	88 (°C,0.45MPa)
Continuous Service Temperature	IEC 60216	N/A
Maximum (short term) Use Temperature		N/A
<b>Electrical Properties</b>		
Insulation Resistance	DIN IEC 60167	N/A
Surface Resistance	DIN IEC 60093	N/A

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### Recommended printing parameters

Extruder Temperature	240 - 270°C
Build Platform Temperature	90-110°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

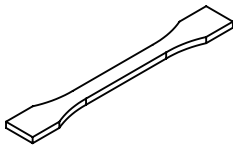
### Drying Recommendations

N/A

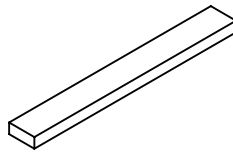
### Notes

The shinglage of eASA material is high. So pls use printer which has chamber to print the eASA filament.

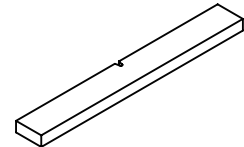
### Mechanical Properties



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	230-270°C
Build Platform Temperature	100°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.

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