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TECHNICAL DATA SHEET

ASA

BRIEF INTRODUCTION

ASA is a 3D printing material with excellent comprehensive performance. Its material properties and mechanical properties are similar to ABS, and it has low odor and uv aging resistance, so it can replace ABS and be applied in outdoor environment. ASA has a low moisture sensitivity, no special moisture-proof measures are required after the consumable is opened, and no obvious wire drawing phenomenon will occur when the wire is exposed to air for printing.

CHARACTERISTIC

Low odor
ASA has minimal odor during printing, making ASA more suitable for 3D printing enthusiasts than ABS materials that release a lot of unpleasant odor during printing. Strongest adhesion between layers
Anti-ultraviolet aging
ASA material can resist degradation, aging and fading caused by ultraviolet radiation. With excellent aging resistance and weather resistance, aging resistance is more than 10 times ABS, printed parts are very suitable for outdoor applications.

IDENTFICATION OF THE MATERIAL	
Trade name	ASA
Application	3D PRINTING

GUIDELINE FOR PRINT SETTINGS	
Nozzle temperature	240-270℃
Bed temperature	90~110℃
Bed material	PEI or PVP solid glue
Active cooling fan	OFF
Recommend nozzle size	0.2mm-1.0mm
Raft distance	0.18-0.2mm
Print speed	20-90mm/s

Settings are based on a 0.4mm nozzle.Nozzle temp.250℃,Bed temp.:105℃， Printing speed:50mm/s,filling rate:100%,filling angle:+/-45° Annealing conditions:100℃ 8hrs.

MATERIAL PROPERTIES	Typical value	Test Method
Melt index	5.6g/10min	250℃ 2.16kg
Glass-transition temperature	98℃	ISO11357
Vicat softening temperature	105℃	ISO306
Density	1.1g/cm^3	ISO 1183
Thermal deformation temperature	90℃/96℃	ISO 75,Method A/ISO 75,Method B
Tensile breaking strength(X-Y)	32.23+/-1.13 MPa	ISO527
Young modulus	2317+/-246MPa	ISO527
Elongation at break 100%（X-Y）	5.1+/-1.4%	ISO527
The bending strength	64.49+/-1.3Mpa	ISO178
Bending modulus	2399+/-147Mpa	ISO178
Notch impact strength	12.9+/-0.9KJ/m^2	ISO179

Other Suggestions:

1. Compared with PLA and PETG materials, ASA/ABS materials need higher ambient temperature in the printing process to help release the residual stress in the forming process of parts. Please keep the printer closed during the printing process, which can effectively avoid warpage and cracking of printed parts. If the device has a heating chamber, you are advised to set the temperature of the heating chamber to between 60 ° C and 80 ° C.

2. If the printing quality decrease because of unpacking for a while, please dry the filament at 80-80℃ for 4-6h.

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