DATA SHEET

ASA 3D Filament

Acrylonitrile styrene acrylate (ASA), also called acrylic styrene acrylonitrile, is an amorphous thermoplastic developed as an alternative to acrylonitrile butadiene styrene (ABS), but with improved weather resistance, and is widely used in the automotive industry. It is an acrylate rubber-modified styrene acrylonitrile copolymer. It is used for general prototyping in 3D printing, where its UV resistance and mechanical properties make it an excellent material for use in fused deposition modelling printers.

Material properties

Description	Method	Typical value
Density	ASTM D792	1.07 g/cm³
Melt Flow Index	ASTM D1238 (220°C/10 kg)	6 g/10 min
Heat deflection temperature	ASTM D648 (4.6 kg)	96°C
Heat deflection temperature	ASTM D648 (18.6 kg)	86°C
Vicat softening temperature	ASTM D1525 (5kg, 50°C/h)	94°C
Tensile strenght (3.2mm/yield)	ASTM D638 (50mm/min)	40 Mpa
Tensile modulus (3.2mm)	ASTM D638 (1mm/min)	1726 Mpa
Tensile elongation (3.2 mm/break)	ASTM D638 (50mm/min)	35%
Tensile elongation (3.2 mm/yield)	ASTM D638 (50mm/min)	5%
Rockwell hardness	ASTM D784 (R-Scale)	93

Printing properties	
Hotend temperature	250 -260°C
Heatbed temperature	90 - 110°C
Cooling print object	0 - 30%
Nozzle diameter	commonly used
Printing environment	inside of box recommended
Bed surface	commonly used (glassbed, PEI, steel etc..)
Bed adhesive	glue stick for easy removal, 3Dlac
Drying material	2 - 3 hours at 80°C

Type of spool	Weight of empty spool
750 gr	230gr
1 kg	250gr

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