

ASA 3D Filament

Acrylonitrile butadiene styrene (ABS), is widely used in the automotive industry for general prototyping in 3D printing, where mechanical properties make it an excellent material for use in fused deposition modelling printers.

Material properties

Description	Method	Typical value
Density	ASTM D792	1.04 g/cm ³
Melt Flow Index	ASTM D1238 (220°C/10 kg)	33 g/10 min
Heat deflection temperature	ASTM D648 (4.6 kg)	93°C
Heat deflection temperature	ASTM D648 (18.6 kg)	83°C
Vicat softening temperature	ASTM D1525 (5kg, 50°C/h)	101°C
Tensile stress (yield)	ISO 527-2/50	38 Mpa
Flexural modulus	ASTM D790	1960 Mpa
Tensile elongation break	ASTM D638	22 %
Flexural strength	ASTM D790	57 Mpa
Rockwell hardness	ASTM D785 (R-Scale)	103

Printing properties

Hotend temperature	230 -250°C
Heatbed temperature	100 - 110°C
Cooling print object	0 - 30%
Nozzle diameter	commonly used
Printing environment	inside of box highly recommended
Bed surface	commonly used (glassbed, PEI, steel etc..)
Bed adhesive	glue stick for easy removal, 3Dlac, ABS juice etc...
Drying material	2 - 4 hours at 80-85°C

Type of spool	Weight of empty spool
750 gr transparent	230gr
1 kg transparent	250gr
1 kg black	220gr
2,5kg black	500gr