

## ASA (Acrylonitrile-Styrene-Acrylate Polymer) 3D Filament Data Sheet

### Physical Properties – Typical Values

Property	Value (SI Units)
Tensile Modulus (ASTM D638)	18,000 kg/cm <sup>2</sup> (256 ksi)
Ultimate Tensile Strength	40 MPa
MFR (D1238)	3 g/10 min
Elongation at Break (D638)	30%
Specific Gravity, ASTM D792	1.07 gm/cm <sup>3</sup>
Izod Impact, 23 C, ASTM D256	50 kg-cm/cm
Glass Transition Temp, ASTM D792	
Heat Distortion Temp, (ASTM E2092)	85 °C

### 3D Printing Guide

Property	Value (SI Units)
Recommended Print Speed	25 - 40 mm /s
Recommended Nozzle Temperature	250 – 265 °C
Recommended Bed Temperature	100 – 110 °C
Preferred Bed Adhesive	Glue, Blue Painters Tape
Special Considerations	Consider Recycling Spools & Unwanted Parts
Nominal Outer Diameter	1.75mm / 2.85mm (Industry Standard +/- 3%)
Available Sizes	750gm, 1KG, 3KG

### Suggested Applications

ASA (acrylic styrene acrylonitrile) is a thermoplastic like ABS, but with improved heat resistance and durability. ASA printed parts are strong and rigid with exceptional UV resistance making it exceptionally useful in exterior or industrial settings. ASA is also water resistant, has strong chemical resistance, anti-static and highly impact resistant. A heated bed is needed due to its high glass transition temperature. ASA has some printing benefits – reduced odors and tighter resolutions. Products made of ASA 3D printer filament are extra tough and they can survive high-heat conditions. When printing, users should remember the high printing temperatures may lead to warping as products cool. Example products include phone cases, outdoor covers, and electrical enclosures.

Available Colors: Natural, Black, White

Material is produced using both virgin and reprocessed materials from consistent sources.

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