

IPCON FILA™ TPU 95A HS
High Speed 95A Polyurethane Filament



This is the filament's Technical Data Sheet (TDS). If you want the Material Safety Data Sheet (MSDS), please contact the customer service to download.

• Product Information

Item	Data
Filament Diameter	1.75 ± 0.03 mm
Net Filament Weight	1 kg ± 0.5%
Filament Length	320 ± 2%
Spool Material	Cardboard (max heat resistance: 150 °C)
Spool Size	Outer Cardboard's diameter: 200 mm; Inner roller's diameter: 90 mm

• Filament's Properties

Physical Properties	Testing Methods	Data
Density	ISO 1183-3	1.21 g/cm ³
Saturated Water Absorption Rate	25 °C, 55% RH, room air	1.04%
Melt Index	230 °C, 2.16 kg	28.4 g/ 10 min
Melting Temperature	DSC, 10 °C/min	187 °C
Vicar Softening Temperature	ISO 306, GB/T 1633	N / A
Heat Deflection Temperature	ISO 75, 0.45 MPa	N / A

Physical Properties*	Testing Methods	Data *
Tensile Strength XY	ISO 527, GB/T 1040	27 MPa
Tensile Strength Z	ISO 527, GB/T 1040	22 MPa
Young's Modulus XY	ISO 527, GB/T 1040	16 MPa
Young's Modulus Z	ISO 527, GB/T 1040	13 MPa
Breaking Elongation Rate XY	ISO 527, GB/T 1040	884%
Breaking Elongation Rate Z	ISO 527, GB/T 1040	560%
Impact Strength XY	ISO 179, GB/T 1043	> 125 kJ/m ² (No Break)
Impact Strength Z	ISO 179, GB/T 1043	> 125 kJ/m ² (No Break)
Tearing Strength XY	ISO 34, GB/T 529-2008	112 N / mm
Resilience Rate	ISO 4662, GB/T 1681-2009	30%
Abrasion Volume	ISO 4649, GB/T 9867-2008	23 mm ³
Abrasion Width	ISO 19252, GB/T 31402-2015	4 mm

*The mechanical properties were tested on specimens printed by IPCON using a Bambu P1S printer (nozzle temperature: 230 °C, bed temperature: 35 °C, printing speed: 150 mm/s, infill density: 100%, infill pattern: concentric) and TPU 95A HS (Milky White) filament. The data is for user reference and comparison only. When using it, users are responsible for the safety, legal compliance and product performance.

• Main Features and Application Scenarios

1. True high speed (up to 300 mm/s), super abrasion resistance (the abrasion volume is only 23 mm³), rich traditional Chinese colors, easy to print (compatible with most FDM printers).
2. Can be used to print shoes, bags, mobile phone cases, toy car tires, seal rings and gaskets, and soft household articles.

• Recommended Printing Settings

Drying Settings Before Printing	70 - 90 °C, 8 - 12 h
Printing Temperature and Humidity	≤ 35 °C, ≤ 20% RH (Sealed with desiccant)
Storage Temperature and Humidity	≤ 35 °C, ≤ 20% RH (Sealed with desiccant)
Compatible Support Material	Itself or support filament for TPU
Compatible Printer Type	Open-frame, enclosed-frame
AMS or CFS	Not Compatible
Compatible Nozzle Material	Brass, stainless steel, hardened steel, etc
Compatible Nozzle Size	0.4 mm / 0.6 mm / 0.8 mm
Compatible Plate Type	Smooth / Textured PEI Plate or other plate
Plate Surface Preparation	No need applying glue for most kinds plate (If the first layer bonding is not firm, please apply liquid glue or PVP solid glue)
Nozzle Temperature	220 - 240 ° C
Bed Temperature	30 - 40 ° C
Fan Speed	80 - 100%
Print Speed	Max: 300 mm/s Recommended: <150 mm/s for supports and thin areas

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