

ESSENTIUM TPU 74D

Essentium's TPU 74D is the highest durometer filament in our broad flexible portfolio. It is a no-warp drop in replacement for ABS. It has excellent impact strength, tear strength, and abrasion resistance.

RECOMMENDED PRINT SETTINGS

Nozzle Temperature, °C	230 – 250	Ex. Multiplier (Flow)	1.03
Bed Temperature, °C	50 – 80	Fan Speed, %	0 – 20
Print Speed, mm/s	20 – 50	Retraction Speed, mm/s	Standard
First Layer Speed, mm/s	15 – 20	Retraction Distance, mm	Standard

MATERIAL PROPERTIES*

Property	Test Method	Value
Shore Hardness	ISO 868	73D
Specific Gravity	ISO 1183	1.2
Tear Strength, kN/m	ISO 34-1	220
Abrasion Loss, mm ³	ISO 4649	20
Compression Set at RT	ISO 815	50
Compression Set at 70°C	ISO 815	55

*Based on injection molded properties

PRINT PARAMETERS*

Nozzle Temperature, °C	240
Bed Temperature, °C	80
Print Speed, mm/s	40
Layer Height, mm	0.35
Ex. Multiplier (Flow)	1.05
Fan Speed, %	0
Machine	Ultimaker 3
Nozzle Size, mm	0.8

*Print parameters in reference to mechanical properties

MECHANICAL PROPERTIES

Property	Test Method	Print Orientation		
		XY	YX	ZX
Tensile Strength, MPa	ASTM D638	33	28	22
Elongation at Break, %	ASTM D638	362	157	49