

TPU-BEND

TPU-BEND is a specifically formulated flexible filament for easy & high speed printing on both direct and Bowden style 3D printers. TPU-BEND features an exceptionally high heat resistance (138°C) and can be stretched as far as 450% before reaching its breaking point. TPU-BEND does not require the use of a heated bed and can even be printed straight onto (clean) glass. TPU-BEND is the flexible filament for (semi)professional users who do not want to compromise and require a high mechanical flexible filament that prints easily. TPU-BEND is an extremely usable flex-filament with a wide variety of different applications such as Orthopedic insoles, Prosthetics, Vibration dampers and much more.

Material features:

- Strong & Flexible
- Works on Direct & Bowden style 3D printers
- Printable at speeds of >75mm/s
- Exceptionally high softening point of 138°C
- 450% elongation at break
- Resistance to oils, greases & microorganisms
- Easily print watertight objects

Filament specs.		
Size	Ø tolerance	Roundness
1,75mm	± 0,05mm	≥ 95%
Material properties		
Description	Testmethod	Typical value
Specific gravity	ISO 1183	1,16 g/cc
Tensile Strength at Yield	ISO 527 1/2	50 Mpa
Elongation-Strain at Break	ISO 527 1/2	450%
Tensile (E) modulus	ISO 527	150 MPa
Impact Strength Charpy method 23°C	ISO 179	NB
Shore Hardness	ISO 7619-1	98A
Printing temperature	DF	235±10°C
Melting temp.	ISO 294	225°C
Glass transition (Tg)	DSC	-16°C
Vicat softening temperature	ASTM D 1525	138°C

Additional info:

TPU-BEND does not require a heated bed to stick well though you can set it to 0-60°C for extra reassurance. TPU-BEND works superb with a direct drive feeder, or newer types of Bowden FDM or FFF technology 3D printers.

By changing the infill / amount of walls you can create the perception of a higher / lower shore than 98A.

Storage: Cool and dry (15-25°C) and away from UV light. This enhances the shelf life significantly.

Dutchfilaments will supply this product with a moisture content <0,2%. After being out of the bag for several hours, redrying in an oven is recommended to eliminate moisture. See page 4 for the recommended drying time and temperatures.