

# TPU

TPU is a specifically formulated flexible filament for easy & high speed printing on both direct and Bowden style 3D printers. TPU features an exceptionally high heat resistance (138°C) and can be stretched as far as 450% before reaching its breaking point. TPU does not require the use of a heated bed and can even be printed straight onto (clean) glass. TPU 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 is an extremely usable flex-filament with a wide variety of different applications such as orthopedic insoles, prosthetics, vibration dampers and much more.

## Features:

- Strong & flexible
- 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

## Colours:

Check the website for available colours.

## Filaments specifications

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 at break	ISO 527 1/2	450%
Tensile modulus (E-Modules)	ISO 527	150 MPa
Impact strength - charpy method 23 °C	ISO 179	NB
Shore A hardness	ISO 7619-1	98A
Printing temperature	ddd drop	230 - 255°C
Melting temperature	-	220°C ± 10°C
Glass transition (Tg)	DSC	-16°C
Vicat softening temperature	ASTM D 1525	138 °C

## Additional info:

Storage: Cool and dry (15-25 °C) and away from UV light. This enhances the shelf life significantly. We recommend the use of a soft spring with TPU filament.