

# Technical data sheet TPU



## Description

TPU (Thermoplastic Polyurethane) is a versatile rubber-like flexible material.

With Shore-A hardness of 95, TPU is a resistant material for several industrial applications, both mechanical or chemical. Moreover, it's been especially designed to improve the 3D printing experience.

## Properties

- High resistance to abrasion, wear and tear
- Great resistance to oils and chemicals
- Excellent impact resistance
- Outstanding elongation at break
- Withstand operating temperatures up to 60 °C
- Compatible with PVA supports

## Recomendations

Plastics absorb moisture from the air. For long periods of time without printing, it is recommended to keep the TPU spools in a box or airtight container with desiccant to keep them dry.

TPU emits low levels of gasses and particles when printed. We recommend printing it in a well-ventilated area to ensure a healthy environment.

## Filament specifications

Diameter	Ø 2.85 mm
Max roundness deviation	-
Net filament weight	750 g
Material Density (ISO 1183)	1.21 g/cm <sup>3</sup>

## Mechanical properties

	Typical value	Test method
Tensile strength	40 MPa	ISO 37
Abrasion Resistance	35 mm <sup>3</sup>	ISO 4649
Hardness (Shore A)	93 A	ISO 868

## Thermal properties

	Typical value	Test method
Heat deflection temperature B	-	-
Vicat softening temperature	-	-

## Printing settings

Extruder temperature	235 °C - 250 °C
Bed temperature	65 °C
Speed	10-40 mm/s
Retraction speed	40 mm/s
Retraction distance	6 mm
Cooling fan	Yes
Minimum layer height	0.05 mm

**More information about TPU:** <https://www.bcn3dtechnologies.com/en/3d-printer/filaments/#tpu>

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