Print date: 19-06-2023　　　　　　　　　　　　　　　　　　　　　**Version:** 1.0

Product specifications

Python Flex TPU 90A is an easy to 3D print flexible filament. With a shore hardness of 90A this filament is much softer than our Python Flex TPU 98A. This in more flexible parts with good elastic properties.

Python Flex TPU 90A shows good adhesion to the print bed and between layers. It is an industrial-grade TPU with outstanding properties. It shows not only great resistance to wear, tear, and abrasion. This flexible filament also features good resistance to chemicals and UV radiation.

Important key features

- Flexible with a shore hardness of 90A.
- Elongation up to 500%.
- Good resistance to chemicals and oils.
- Resistant to wear, tear, and abrasion.
- Thermal resistance up to 74°C.

Suitable applications

- Manufacturing seals and gaskets.
- Protective bumpers and vibration dampers .
- Snap-fit applications.
- Various Orthopedic applications.
- 3D printing sleeves and hinges.

Material properties	Typical value	Test Method
Density	1.22 g/cm3	DIN 53479

Mechanical properties		
Shore hardness	90A	DIN 53505
Tensile strength (MD)	35 MPa	DIN 53504
Elongation at break (MD)	500%	DIN 53515
Tear strength (MD)	90 N/mm	DIN 53515
Abrasion resistance	35 mm^3	DIN 53516

Thermal properties		
HDT-B	74°C	-

Drying recommended

TPU is a hygroscopic thermoplastic material and will attract and hold water molecules from the surrounding environment. For optimal printing results it is recommended to dry the filament before usage and even 3D print from a dry box for larger prints. This will ensure optimal material properties.

Storage and handling

Filament should be stored at room temperature in a dry and dark place with humidity below 15%. Recommended storage temperature is ca. 18-25°C (64.4 -77.0°F). Keep out of moisture, sunlight and direct heat. When stored properly, product has a shelf life of at least 24 months. To obtain the best parameters of the printed object, it is recommended to dry the material prior to usage and to 3D print it directly from a dry box.

Product export information

HS Code	Description	Origin
39169090	Monofilament for 3D printing	European Union

Disclaimer