

TPU

Popis 1

Thermoplastic polyurethane (TPU) is a very common form of elastomeric polymer, also called an elastomer, that can be printed on FDM and SLS 3D printers. Among the various types of flexible 3D printing filaments, TPU is somewhat stiffer, which makes it easier to manufacture and use. Note: Flexibility in FDM printing varies depending on the amount of infill.

Popis 2

FDM TPU has a hardness range of Shore 80A-95A, making it a medium-strength and very flexible material. It resists higher compressive and tensile forces compared to more common materials like PLA and ABS. It excels in elasticity and durability, making it ideal for applications where resistance is required. TPU is also extremely resistant to mechanical wear and impacts, making it perfect for protective covers, bumpers, and other durable parts.

Výhody

- Flexibilita
- Odolnosť voči opotrebeniu
- Odolnosť voči nárazom
- Pevnosť

Nevýhody

- Nízka tepelná odolnosť
- Obmedzenia pri komplexných geometriách

Vlastnosti

- **Pevnosť v ťahu:** 26 - 55 MPa
- **Modul pružnosti v ťahu:** 9.4 - 26 MPa
- **Pomerné predĺženie:** 330 - 657%
- **Modul pružnosti v ohybe:** 72 - 78.7 MPa
- **HDT (pri 0.45 MPa):** 40 - 50°C