

## Technical data sheet (TPU D60)

### Thermoplastic Polyurethane Elastomer

#### Description

Thermoplastic elastomer polymer (TPU) is a highly malleable elastomer that prints with high toughness while retaining great flexibility. TPU is more rigid, somewhat more durable, it has a greater resistance to abrasion and the ability to maintain its elasticity at low temperatures.

#### Material Properties

Density	1.18 g/cm <sup>3</sup> ISO 1183/A
Chemical Name	Thermoplastic Polyether-Polyurethane

#### Mechanical Properties

Tensile strength	50 MPa	DIN 53504-S2
Hardness	D60 (Shore D scale)	DIN ISO 48-4 (3s)
Tear strength	170 kN/m	ISO 34-1
Elongation @ break	400%	DIN 53504-S2
Stress at 20% elongation	20 MPa	DIN 53504-S2
Stress at 100% elongation	19 MPa	DIN 53504-S2
Stress at 300% elongation	41 MPa	DIN 53504-S2
Notched impact strength (Charpy) at +23°C & -30°C	nB kJ/m <sup>2</sup> & 16 kJ/m <sup>2</sup>	DIN EN ISO 179-1
Abrasion loss	29 mm <sup>3</sup>	DIN ISO 4649-A
Modulus of elasticity - Tensile test	200 MPa	DIN EN ISO 527
Compression set 23°C / 72 hours & 70°C / 24 hours	40% & 50%	DIN ISO 815

### Print Settings

Nozzle temperature	200 - 245°C
Bed temperature	0 - 60°C
Active cooling fan	100%

### Filament Specification

Diameter	1.75 mm & 2.85 mm
Tolerance	± 0.08

### Storage & Handling

During storage, the product may acquire humidity if exposed to fresh air. The humidity it absorbs depends on the temperature, humidity, and time of exposure. Therefore, it should be stored in its packaging in a cool place and kept at temperatures below 50°C. No special restrictions on storage with other products.

### Expiration Date (Shelf Life)

If stored correctly and in its original packaging, the product can be used up until 24 months after opening. If the product is stored in a package that has been exposed to humidity during an extended amount of time, it could deteriorate and lose its mechanical and physical properties, even after drying.

### Security

This product is not classified as dangerous according to the CE Regulation No 1272/2008, and therefore is not subject to special transport regulations. This product does not melt at room temperature.

Suitable for food contact	No
Suitable for Toys	No
Suitable for packaging	No

**\*\*Disclaimer:** The product and technical information provided in this datasheet is correct to the best of our knowledge. The information given is provided as a guidance for good use, handling and processing and is not to be considered as a quality specification. The information only relates to the specific product and the material properties.