

Thermoplastic polyester elastomer (TPC)

General

TPC is a copolyester based thermoplastic elastomer.

The TPC is used in dynamic applications where prolonged constant flexibility is required, such as applications where material is continuously bent

becomes. TPC also has high strength making it resistant to damage.

TPC is ideal for dual extrusion printing, for example in combination with PETG to print sealing areas and other areas that require high elasticity.

The lower the infill percentage is chosen, the more elastic the printed component remains.

The same applies to the wall thickness. The thinner the more elastic. This means that components with partially more elastic/reinforced areas can also be printed.

In order to process TPC successfully, a heatable printing plate is essential.

advantage

- High elasticity
- high wear and abrasion resistance
- well suited for dual extrusion
- very good resistance to chemicals
- Exceptional resistance to flexural fatigue

disadvantage

- relatively large shrinkage
- Only printable with Direct Drive Extruder
- low printing speed

Processing data

Printing temperature

200-240 °C

Heated bed temperature

100-120 °C

Technical specifications

Shrinkage (ISO 294-4)	0.95	%
MFR (ISO 1133)	11.7	g/10min
Yield stress (ISO 527-1/-2)	43	MPa
Elongation at yield	-	%
Elongation at break	-	%
Tensile modulus (ISO 527-1/-2)	200	MPa
Heat deflection temperature 0.45 MPa	-	°C
Vicat softening temperature A (ISO 306)	90	°C
Thermal conductivity 23°C	-	W/(K*m)
Flammability (UL 94)	HB	
Density (ISO 1183)	1.20	g/cm ³