

Thermoplastic vulcanizate (TPV)

General

TPV is a high-quality thermoplastic vulcanizate specially developed for demanding technical applications. With a Shore A hardness of 92, this material offers an exceptional combination of strength and flexibility. It combines the elastic properties of vulcanized rubber with the ease of processing of thermoplastics, making it ideal for 3D printing.

Thanks to its excellent resistance to weathering, UV radiation, ozone, and numerous chemicals, TPV is particularly suitable for seals, cable ducts, and flexible connectors. The material also finds versatile applications in industry and household appliances where permanent elasticity and dimensional stability are required.

The high elongation at break of up to 630% underscores the material's elasticity, while the density of approximately 1.24g/cm³ ensures a favorable weight-to-performance ratio.

Whether for durable sealing profiles, ergonomic handles, or protective components – this TPV impresses with its versatility and technical excellence.

Advantageous

- Excellent weather, UV, and ozone resistance
- Good chemical resistance to oils and lubricants
- High elasticity

Disadvantageous

- Only printable with Direct Drive extruder
- low print speed

Processing data

Printing temperature

175-230 °C

Heated bed temperature

80-95 °C

Build chamber temperature

60-80 °C

Drying temperature

82 °C

Drying time

3h

Technical data

Shrinkage

1.1 %

MFR

- g/10min

Yield stress

7.2 MPa

Yield elongation

630 %

Elongation at break (ISO 37)

630 %

Tensile modulus (ISO 37)

13.9 MPa

Heat deflection temperature

90 °C

0.45 MPa

Vicat softening temperature A

- °C

Thermal conductivity 23°C

- W/(K*m)

Flammability (UL 94)

V0

Density (ISO 1183 1A)

1.24 g/cm³