

TPU

TECHNICAL DATA SHEET

FILSHAPER TPU

Elastic filament in VSHAPER offer. It is sold in natural color. The filament is characterized by high chemical resistance eg. oils greases and fuels. It has high fatigue and UV light resistance. It can be used in range of temperature from -10 to 80 celsius degrees. TPU parts are mainly used in automotive and sport industry eg. shoes, hoses, seals, cases, non-air tires, wires, bumpers, smartphone cases

DELIVERY OF FILSHAPER TPU

TPU filament has the nominal diameter of 1,75mm and is fit for FDM/FFF printing. It's supplied in 0,85kg spool. The spools are packed in vacuumed plastic bags to prevent hygroscopicity.

STORAGE

Store the filament in airtight packaging in dry place. The filament is usable up to 6 months after opening.

DRYING RECOMMENDATIONS

It is recommended to dry the filament before every usage to avoid stringing, bubbling or other defects: 4h in 80°C

Mechanical properties	Value	Unit	Test Standard
Tensile Modulus	-	MPa	-
Tensile Strength	26	MPa	ISO 527
Yield stress	-	MPa	-
Yield strain	-	%	-
Stress at break	-	MPa	-
Nominal strain at break	700	%	ISO 527
Flexural modulus	66	MPa	ASTM D790
Flexural strength	-	MPa	-
Charpy impact strength, +23°C	-	kJ/m ²	-
Charpy impact strength, -30°C	-	kJ/m ²	-
Izod notched impact strength, +23°C	-	kJ/m ²	-
Izod notched impact strength, -30°C	-	kJ/m ²	-
Hardness (D-Scale)	40	-	ISO 7619

Thermal properties	Value	Unit	Test Standard
Melting temperature	160	°C	-

Glass transition temperature	-	°C	-
Temp. of deflection under load A, 1 .80 MPa (HDT)	-	°C	-
Temp. of deflection under load B, 0 .45 MPa (HDT)	70	°C	ISO 75

Physical properties	Value	Unit	Test Standard
Density	1,16	g/cm ³	ISO 1183
Filament Diameter	1.75	mm	-
Linear Shrinkage	0,8	%	ASTM D955

Burning behavior	Value	Unit	Test Standard
Flammability class	-	class	-

Rheological properties	Value	Unit	Test Standard
Melt mass-flow rate, MFR	-	g/10 min	-
Temperature	-	°C	-
Load	-	kg	-

Characteristics	
Key Feature, Industrial Sector	Automotive, sport
Key Feature, Processing	3D printing
Key Feature, Resistance to	UV light, chemicals, fatigue
Key Feature, Electrical	Insulator
Example applications	Shoes, hoses, wires, cases, non-air tires, seals
Processing	FFF/FDM
Special Characteristics	-
Color	Natural
Delivery form	Monofilament

Printing settings	VSHAPER 270			VSHAPER 500		
	STD	PRO	MED	STD	PRO	MED
Print temperature	-	-	-	-	225°C	225°C
Bed temperature	-	-	-	-	80°C	80°C
Chamber temperature	-	-	-	-	-	-
Adhesive plate material	-	-	-	-	V-SURFACE LT	V-SURFACE LT
Adhesive glue	-	-	-	-	Dimafix	Dimafix
Model shrinkage	-	-	-	-	~1,1%	~1,1%

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