

PEEK

TECHNICAL DATA SHEET

FILSHAPER PEEK

High endurance filament in VSHAPER offer. It is sold in natural color. The filament is characterized by very high chemical resistance for most of the chemicals. It has high resistance to UV light, fatigue and heat. Material can be used in range of temperature from -30 to 290 celsius degrees. PEEK parts are mainly used in aviation, medicine and food industry eg. metal replacements, bearings, valves, implants, food production line parts, gears, timing chain tesioners.

DELIVERY OF FILSHAPER PEEK

PEEK filament has the nominal diameter of 1,75mm and is fit for FDM/FFF printing. It's supplied in 0,5kg spool. The spools are packed in vacuumed plastic bags to prevent hygrosopicity.

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	4100	MPa	ISO 527
Tensile Strenght	105	MPa	ISO 527
Yield stress	-	MPa	-
Yield strain	-	%	-
Stress at break	-	MPa	-
Nominal strain at break	30	%	ISO 527
Flexural modulus	3900	MPa	ISO 178
Flexural strength	130	MPa	ISO 178
Charpy impact strength, +23°C	4,2	kJ/m ²	ISO 179
Charpy impact strength, -30°C	-	kJ/m ²	-
Izod notched impact strength, +23°C	5	kJ/m ²	ISO 180
Izod notched impact strength, -30°C	-	kJ/m ²	-
Hardness (D-Scale)	85	-	ISO 7619

Thermal properties	Value	Unit	Test Standard
Melting temperature	343	°C	-

Glass transition temperature	143	°C	-
Temp. of deflection under load A, 1 .80 MPa (HDT)	156	°C	ISO 75
Temp. of deflection under load B, 0 .45 MPa (HDT)	-	°C	-

Physical properties	Value	Unit	Test Standard
Density	1,30	g/cm ³	ISO 1183
Filament Diameter	1.75	mm	-
Linear Shrinkage	-	%	-

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	Aviation, medicine, food industry
Key Feature, Processing	3D printing
Key Feature, Resistance to	Chemicals, heat, fatigue
Key Feature, Electrical	Insulator
Example applications	Metal replacements, bearing, food production line parts, valves, implants
Processing	FFF/FDM
Special Characteristics	-
Color	Natural
Delivery form	Monofilament

Printing settings	VSHAPER 270			VSHAPER 500		
	STD	PRO	MED	STD	PRO	MED
Print temperature	-	410°C	410°C	-	480°C	480°C
Bed temperature	-	130°C	130°C	-	130°C	130°C
Chamber temperature	-	70°C	70°C	-	80°C	80°C
Adhesive plate material	-	V-SURFACE HT	V-SURFACE HT	-	V-SURFACE HT	V-SURFACE HT
Adhesive glue	-	-	-	-	-	-
Model shrinkage	-	~0,9 %	~0,9%	-	~0,9%	~0,9%

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