

# PET-G

## TECHNICAL DATA SHEET

### FILSHAPER PET-G

Standard filament in VSHAPER offer. It is sold in natural color. The filament is characterized by chemical resistance to aliphatic hydrocarbons, alcohols and gasoline. Material can be used in range of temperature from -10 to 70 celsius degree. It is also wear resistant. PET-G parts are mainly used in furniture and food industry eg. bottles, cups, lunch boxes, lampshades, clips, snap fit parts, glazings etc. Might be used in prototypes due to its stiffness.

### DELIVERY OF FILSHAPER PET-G

PET-G filament has the nominal diameter of 1,75mm and is fit for FDM/FFF printing. It's supplied in 1kg 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 Strenght	28	MPa	ISO 527
Yield stress	-	MPa	-
Yield strain	-	%	-
Stress at break	-	MPa	-
Nominal strain at break	100	%	ISO 527
Flexural modulus	-	MPa	-
Flexural strength	68	MPa	ISO 178
Charpy impact strength, +23°C	-	kJ/m <sup>2</sup>	-
Charpy impact strength, -30°C	-	kJ/m <sup>2</sup>	-
Izod notched impact strength, +23°C	6,2	kJ/m <sup>2</sup>	ISO 180
Izod notched impact strength, -30°C	-	kJ/m <sup>2</sup>	-
Hardness (R-Scale)	109	-	ISO 2039-2

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

Glass transition temperature	-	°C	-
Temp. of deflection under load A, 1 .80 MPa (HDT)	64	°C	ASTM D648
Temp. of deflection under load B, 0 .45 MPa (HDT)	70	°C	ASTM D648

Physical properties	Value	Unit	Test Standard
Density	1,27	g/cm <sup>3</sup>	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 volume-flow rate, MVR	-	cm <sup>3</sup> /10 min	-
Temperature	-	°C	-
Load	-	kg	-

Characteristics	
Key Feature, Industrial Sector	Food and furniture industry
Key Feature, Processing	3D printing
Key Feature, Resistance to	fatigue
Key Feature, Electrical	Insulator
Example applications	Bottles, cups, plates, snap fit parts, planters, lunch boxes, clips, lampshades, glazings
Processing	FFF/FDM
Special Characteristics	Recycleable
Color	Natural
Delivery form	Monofilament

Printing settings	VSHAPER 270			VSHAPER 500		
	STD	PRO	MED	STD	PRO	MED
Print temperature	-	-	-	240°C	240°C	240°C
Bed temperature	-	-	-	90°C	90°C	90°C
Chamber temperature	-	-	-	-	-	-
Adhesive plate material	-	-	-	V-SURFACE LT	V-SURFACE LT	V-SURFACE LT
Adhesive glue	-	-	-	Dimafix	Dimafix	Dimafix
Model shrinkage	-	-	-	~0,8%	~0,8%	~0,8%

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