PA12

TECHNICAL DATA SHEET

FILSHAPER PA12

Engineer filament in VSHAPER offer. It is sold in natural color. The filament is characterized by high chemical resistance eg. oils, gasoline, alcohols and acetone. It has high wear resistance. Material can be used in range of temperature from -30 to 130 celsius degrees. PA12 parts are mainly used in automotive and medical area eg. custom tool handles, robot grips, handles, implants

DELIVERY OF FILSHAPER PA12

PA12 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	45	MPa	ISO 527
Yield stress	-	MPa	-
Yield strain	-	%	-
Stress at break	-	MPa	-
Nominal strain at break	-	%	-
Flexural modulus	-	MPa	-
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	7	kJ/m^2	ISO 179
Izod notched impact strength, -40°C	7	kJ/m^2	ISO 179
Hardness (D-Scale)	-	-	-

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

Glass transition temperature	-	°C	-
Temp. of deflection under load A, 1 .80 MPa (HDT)	50	°C	ISO 75
Temp. of deflection under load B, 0 .45 MPa (HDT)	110	°C	ISO 75

Physical properties	Value	Unit	Test Standard
Density	1,02	g/cm^3	ISO 1183
Filament Diameter	1.75	mm	-
Linear Shrinkage	-	%	-

Burning behavior	Value	Unit	Test Standard
Flammability class	HB	class	UL94

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

Characteristics	
Key Feature, Industrial Sector	Automotive, medical, tool
Key Feature, Processing	3D printing
Key Feature, Resistance to	Chemicals, heat, fatigue
Key Feature, Electrical	Insulator
Example applications	Holders, robot grips, implants, custom tool handles
Processing	FFF/FDM
Special Characteristics	-
Color	Natural
Delivery form	Monofilament

Printing settings	VSHAPER 270			VSHAPER 500		
	STD	PRO	MED	STD	PRO	MED
Print temperature	-	250°C	250°C	280°C	280°C	280°C
Bed temperature	-	90°C	90°C	100°C	100°C	100°C
Chamber temperature	-	70°C	70°C	70°C	70°C	70°C
Adhesive plate material	-	V-SURFACE LT	V-SURFACE LT	V-SURFACE LT	V-SURFACE LT	V-SURFACE LT
Adhesive glue	-	Magigoo	Magigoo	Magigoo	Magigoo	Magigoo
Model shrinkage	-	~1,2%	~1,2%	~1,2%	~1,2%	~1,2%