ASA

TECHNICAL DATA SHEET

FILSHAPER ASA

Standard filament in VSHAPER offer. It is sold in natural color, black and others. The filament is characterized by high stiffness and it is chemically resistant to detergents, naphta and ethanol. In comparison to its replacement ABS, it has higher resistance to UV light and weather conditions. It can be used in range of temperature from -30 to 120 celsius degrees. ASA parts are mainly used in electronic, automotive, protective industry and wide range of prototypes eg. geodetic enclosures, agd enclosures and equipment which can be used outdoor.

DELIVERY OF FILSHAPER ASA

ASA 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	ASTM D638
Yield stress	-	MPa	-
Yield strain	-	%	-
Stress at break	-	MPa	-
Nominal strain at break,	23	%	ASTM D638
Flexural modulus	-	MPa	-
Flexural strength	66	MPa	ASTM D790
Charpy impact strength, +23°C	-	kJ/m^2	-
Charpy impact strength, -30°C	-	kJ/m^2	-
Izod notched impact strength, +23°C	18	kJ/m^2	ASTM D256
Izod notched impact strength, -30°C	-	kJ/m^2	-
Hardness (R-Scale)	105	-	ASTM D785

Thermal properties	Value	Unit	Test Standard
Melting temperature	-	°C	-
Glass transition temperature	-	°C	-
Temp. of deflection under load A, 1 .80 MPa (HDT)	85	°C	ASTM D648
Temp. of deflection under load B, 0 .45 MPa (HDT)	-	°C	-

Physical properties	Value	Unit	Test Standard
Density	1,06	g/cm^3	ASTM D792
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	-	$cm^3/10$ min	-
Temperature	-	°C	-
Load	-	kg	-

Characteristics	
Key Feature, Industrial Sector	Automotive, Electronic, Protective industry
Key Feature, Processing	3D printing
Key Feature, Resistance to	Weather, UV light, impact
Key Feature, Electrical	Insulator
Example applications	Helmets, electronic enclosures, automotive components and wide variety of equipment exposed to weather conditions
Processing	FFF/FDM
Special Characteristics	stiffness

Color	Black
Delivery form	Monofilament

Printing settings	VSHAPER 270			VSHAPER 500		
	STD	PRO	MED	STD	PRO	MED
Print temperature	240°C	240°C	240°C	265°C	265°C	265°C
Bed temperature	95°C	95°C	95°C	95°C	95°C	95°C
Chamber temperature	-	60°C	60°C	60°C	60°C	60°C
Adhesive plate material	V-SURFACE LT	V-SURFACE LT	V-SURFACE LT	V-SURFACE LT	V-SURFACE LT	V-SURFACE LT
Adhesive glue	Dimafix	Dimafix	Dimafix	Dimafix	Dimafix	Dimafix
Model shrinkage	~0,8%	~0,8%	~0,8%	~0,8%	~0,8%	~0,8%