PA.
12

Technical specification
Everfil™ PA.12

DESCRIPTION

Everfil Nylon PA.12 - engineering polymer produced primarily for the automotive, clothing and machine industries thanks to its resistance to temperature, alcohols and chemicals, is particularly useful for mechanical and technical applications. It is extremely durable, strong and unbreakable. It works well with metal tools and paints, which makes it even more versatile and functional. **Everfil Nylon PA.12** it adapts perfectly to dyeing and has no tendency to fade. It is one of the few materials for 3D printing that can be post-processed using tools dedicated to metalworking. It is incredibly flexible material - it extends by 50% before it breaks. However, the filament is not resistant to concentrated alkalis and acids. Nylon filament absorbs moisture relatively quickly, so it should be stored in a tightly closed bag

Application:

- Mechanical parts: guides, gear wheel
- Technical elements: bearings, nuts
- Wire and cable sheathing

TYPICAL PROPERTY VALUES

Filament	Nominal Value	Unit	Test Method
Filament diameter	1,75 , 2,85	mm	-
Diameter tolerance	+/- 0,03	mm	-
Spool weight	1,0 , 3,0 , 5,0	kg netto	-

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1,01	g/cm2	ISO1183
MFR	8	Cm2/10min	ISO 1133
Clarity	transparent		

Mechanical	Nominal Value	Unit	Test Method
Tensile Stress (Yield)	50	MPa	ISO527-2
Tensile Strain (Yield)	5,00	%	ISO527-2
Nominal Tensile Strain at Break	> 50	%	ISO527-2
Tensile Modulus	1500	MPa	ISO527-1
Charpy Notched Impact Strength 30°C 23°C	 6.0 11	 kJ/m² kJ/m	ISO 179/1eA

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Charpy Unnotched Impact Strength 30°C 23°C	- -	 No Break No Break	ISO 179/1eA
Shore D Hardness, 15s	71/-		ISO76-19-1
Melting Temperature, 10°C/min	178/+	°C	ISO11357-1/-3

PRINT CONDITIONS

Everfil™ PA.12

(may be different for different printers)

3D Printers	Typical Value	Unit
Extruder temperature	255-275	°C
Bed temperature (if needed)	90-105	°C
Printing speed	35-60	mm/s
Airflow	0-10	%
Closed chamber	required	
Flowrate	95-105	%
Retraction	2-3	mm
Drying conditions	70°C/4h	
Substrate	Glass, PVA, glue	

STORAGE

Filament can't handle moisture very well and that is why we recommend storing your filament in a cool, dry environment, ideally in a package vacuum sealed with silicate.

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