PA Filament

PA – POLYAMIDE (NYLONE)

PA (Nylon) is an incredibly strong, durable, and versatile 3D printing material. Flexible when thin, but with very high inter-layer adhesion, nylon lends itself well to things like living hinges and other functional parts.

Nylon filament prints as a bright natural white with a translucent surface, and can absorb color added post process with most common, acid-based clothing dyes or synthetic cloth specific dyes.

Nylon filament is extremely sensitive to moisture, so taking drying measures during storage and immediately prior to printing (using desiccant, vacuum, or elevated temperature) is highly recommended for best results. Our PA is a specially formulated 3D printing Nylon filament that comes in a variety of colors and 1.75mm and 2.85mm diameter.

OPTIONS:

Size:	1.75	mm -/+ 0.03 mm
	2.85	mm -/+ 0.03 mm
Color:	Full Color Range (Special Colors By Order)	
Packaging:	0.5	Kg Spools
	1.0	Kg Spools
	6.0	Kg Spools

FEATURES:

Higher melting temperature for better mechanical strength at higher temperature.
Free from harmful or hazardous materials.
Strong, impact resistant thermoplastic.
Produces objects with extreme layer adhesion and toughness.
Flexible when it's thin.
Very durable.
Parts can withstand temperatures of up to 80 °C and higher without losing strength.
Can absorb color added post process.
Shall be printed on heat bed.
Bed adhesion with PVA-based glues.

SPECIFICATIONS:

Filament Material:	PA	
Specific Gravity:	1.14	gr/cm3
Size:	1.75	mm -/+ 0.03 mm
	2.85	mm -/+ 0.03 mm
Printing Information:	Extruder: 235 – 270 °C	
	Bed:	60 – 80 °C
Working Temperature:	Withstands up to 80 °C	

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ENGINEERING PROPERTIES:

Characteristic		Unit	Test method	Measured value
Mechanical Characteristics				
Tensile stress at yield		MPa	ISO 527-1,2	80
Tensile strain at break		%		30
Tensile modulus		GPa		2.9
Flexural strength		MPa	ISO 178	110
Flexural modulus		GPa		2.7
Charpy notched impact strength		kJ/m^2	ISO 179-1/1eA	6
Rockwell hardness	R. Scale	-	ISO 2039-2	120
	M. Scale			80
Thermal Characteristics				
Melting temperature		°C	ISO 11357	215~225
Coeff. of linear thermal expansion		$x10^{-5}$ /°C	ISO 11359-2	8
Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,2	155
	1.8 MPa	°C		60
Electrical Characteristics				
Volume resistivity		Ωcm	JIS K6911	10^{15}
Electric strength		kV/mm	IEC 60243-1	20
Relative permittivity		-	IEC 60250	3.5
Arc resistance		s	D-495(ASTM)	119
C.T.I		UL index	UL746A	0
Others				
Density		g/cm^3	ISO 1183-3	1.14
Water absorption	23 °C, 50 %RH	%	UBE method	3
Moulding Shrinkage	MD	%	UBE method(30x100x3t)	1.4
	TD			1.5
Nomenclature according to ISO 1874-1				PA6, M, 12-030

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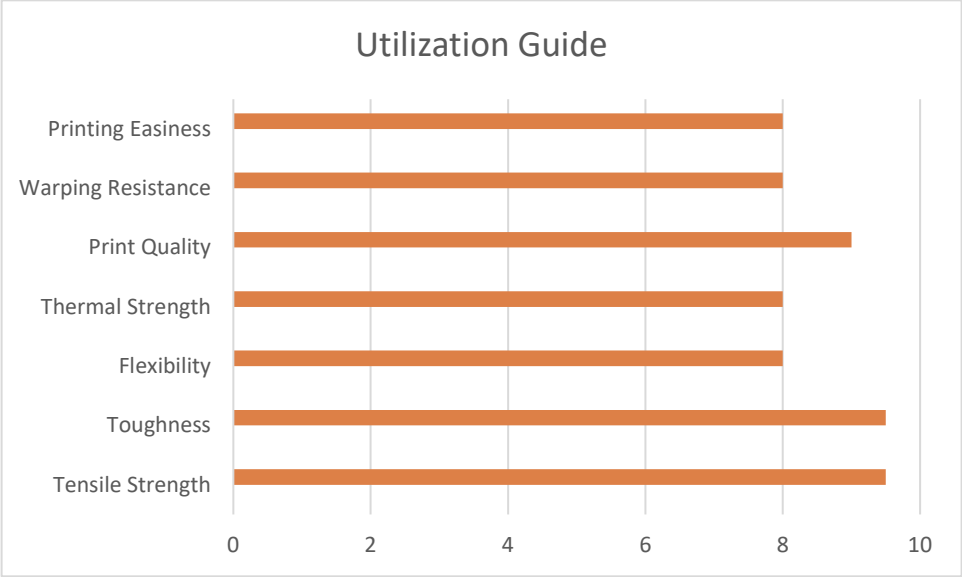
UTILIZATION GUIDE:
(Comparative, Out of 10)

Tensile Strength	9.5
Toughness	9.5
Flexibility	8
Thermal Strength	8
Print Quality	9
Warping Resistance	8
Printing Easiness	8



CERTIFICATES:

Management:	BS EN ISO 9001:2015
Quality:	CE (CE–2924)
Environment:	RoHS (UQ-5724)