Fishy Filaments

Fishy Filaments Technical Data Sheet - (15th May 2018)

Product Name: Longships
Chemical Names: Polyamide 6, PA6 or Nylon 6

Description

Longships is a semi-crystalline nylon blend with high tensile strength, good impact resistance and low surface friction.

Nylon is a technical, engineering grade material and is not recommended for novice users.

As with most nylons, Longships is susceptible to absorbtion of moisture both before and after printing.

Filament should be dried prior to use and kept in a controlled environment between uses. Insufficient drying prior to use will result in warping, poor surface quality and an increased probability of print failure.

For extended print runs a humility controlled caddy or cabinet is recommended.

Typical drying parameters are ~5 hours at 70-80ºC at a controlled humidity of 10% H2O or lower. Effective drying cannot be achieved reliably at temperatures below 70ºC. The use of domestic ovens to dry filament is not recommended.

A heated printer bed is highly recommended as is the use of a suitable bed preparation material e.g. 3DLAC.

Please also note before purchase that Longship's print temperature is at the upper end of many desktop printer's off-the-shelf capabilities. Extended operation at the limits of printer specifications is not recommended.

Typical Printing Parameters

Bed temperature:	**90-110 ºC**
Printing temperature:	**265-275 ºC**
Printing speed guide:	**40-60 mm/s**

Test	Test Standard	SI Unit	Measured Value	Standard Deviation
Tensile Strength				
Tensile Strength @ Break	ISO 527-2	Mpa	52	4
Elongation @ Break	ISO 527-2	%	45	19
Tensile Strength @ Yield	ISO 527-2	Mpa	61.9	2.9
Elongation @ Yield	ISO 527-2	%	7.7	0.1
Tensile Modus	ISO 527-2	Mpa	2852	114
Flex (3 Point)				
Flexural Stress	ISO 178	Mpa	57	5
Flexural Modulus	ISO 178	Mpa	1760	197
Izod Impact (Notched)	ISO180	kj/m^2	7	2
Melt Flow	ISO 1133	g/10min	15	-
VICAT	ISO306/B120	ºC	190	1

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Product Name: Porthcurno
Chemical Names: Polyamide 6, PA6 or Nylon 6

Description

Porthcurno is a semi-amorphous nylon blend with high tensile strength, good impact resistance and low surface friction. Its post-print properties after atmospheric curing or overnight soaking in water make an especially interesting material for use in applications where moderate flexibility and high strength are useful e.g. wearables and live hinges.

Nylon is a technical, engineering grade material and is not recommended for novice users.

As with most nylons, Porthcurno is susceptible to absorbtion of moisture both before and after printing.

Filament should be dried prior to use and kept in a controlled environment between uses. Insufficient drying prior to use will result in warping, poor surface quality and an increased probability of print failure.

Typical drying parameters are ~5 hours at 70-80C at a controlled humidity of 10% H2O or lower. Effective drying cannot be achieved reliably at temperatures below 70C. The use of domestic ovens to dry filament is not recommended.

A heated printer bed is highly recommended as is the use of a suitable bed preparation material e.g. 3DLAC

Typical Printing Parameters

Bed temperature:	**60-80 °C**
Printing temperature:	**230-240 °C**
Printing speed guide:	**40-60 mm/s**

Test	Test Standard	SI Unit	Measured Value	Standard Deviation
Tensile Strength				
Tensile Strength @ Break	ISO 527-2	Mpa	55	7
Elongation @ Break	ISO 527-2	%	178	79
Tensile Strength @ Yield	ISO 527-2	Mpa	59	2
Elongation @ Yield	ISO 527-2	%	41	18
Tensile Modus	ISO 527-2	Mpa	2745	189
Flex (3 Point)				
Flexural Stress	ISO 178	Mpa	70	2
Flexural Modulus	ISO 178	Mpa	2126	184
Izod Impact (Notched)	ISO180	kj/m^2	-	-
Melt Flow	ISO 1133	g/10min	-	-
VICAT	ISO306/B120	°C	-	-