

Technical Data Sheet

(updated 15th April 2019)

Product Name - Longships

Material - Nylon 6, Polyamide 6, PA 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 absorption 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 humidity controlled caddy or cabinet is recommended. Typical drying parameters are ~5 hours at 70-80°C at a controlled humidity of 20% H₂O or lower. Effective drying cannot be achieved reliably at temperatures below 70°C. 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 or Magigoo PA.

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 °C
Printing Temperature	260 - 280 °C
Printing Speed	30 - 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 Modulus	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	°C	190	1

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