

# Technical Data Sheet

# Ultrafuse PLA BASIC

Date / Revised: 19.07.2021

Version No.: 1.0

## General information

### Components

Polylactic acid based filament for Fused Filament Fabrication.

### Product Description

Ultrafuse PLA BASIC is a filament featuring good printing and mechanical properties. It has high diameter accuracy, low water absorption and does not easily create bubbles, which can minimize the occurrence of warping, nozzle clogging and oozing. The neat winding process during production helps reduce filament tangles and jamming, thereby increasing the stability of printing large-sized samples for a long time. The quality and process stability of raw materials allows good dimensional stability, strength, and toughness for samples printed with Ultrafuse PLA BASIC. The filament is available in various colors.

### Delivery form and warehousing

Ultrafuse PLA BASIC filament should be stored at 15 - 25°C in its originally sealed package in a clean and dry environment. If the recommended storage conditions are observed the products will have a minimum shelf life of 12 months.

### Product safety

Recommended: Process materials in a well ventilated room, or use professional extraction systems. For further and more detailed information please consult the corresponding material safety data sheets.

### Notice

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.

### Recommended 3D-Print processing parameters

Nozzle Temperature	200 – 220 °C / 392 – 428 °F
Build Chamber Temperature	-
Bed Temperature	60 – 80 °C / 140 – 176 °F
Bed Material	Glass
Nozzle Diameter	≥ 0.4 mm
Print Speed	40 - 80 mm/s

### Drying Recommendations

Drying recommendations to ensure printability	PLA BASIC is in a printable condition, drying is not necessary
---	--

### General Properties

		Standard
Printed Part Density	1239 kg/m <sup>3</sup> / 77.0 lb/ft <sup>3</sup>	ISO 1183-1

## Mechanical Properties



Print direction	Standard	XY Flat	XZ On its edge	ZX Upright
Tensile strength	ISO 527	32.2 MPa / 4.7 ksi	-	20.2 MPa / 2.9 ksi
Elongation at Break	ISO 527	7.3 %	-	1.2 %
Young's Modulus	ISO 527	2440 MPa / 354 ksi	-	2074 MPa / 301 ksi
Impact Strength Izod (unnotched)	ISO 180	24.2 kJ/m <sup>2</sup>	-	7.5 kJ/m <sup>2</sup>