

TECHNICAL DATA SHEET

Filaticum Engineering

3D printing filament for FDM/FFF printer

Product Description

Filaticum Engineering offers enhanced possibilities for industrial applications. The thermal stability of objects printed with this filament is extremely high, they could bear up to 140 °C heat, without any heat treatment after printing. Filaticum Engineering has excellent impact resistant and durability properties compared to the basic PLA. This performance is due to different additives and lubricants. Based on the tests, the printed objects do not warp and they keep their shape well.

Applications

Functional objects exposed to heat and designed for long-term use, industrial prototyping, production; production of built-in components; modelling in automotive industry; fixtures, vibrational, mechanical parts.

Specification

	Filaticum Engineering
Diameter	1,75 mm, 2,85 mm
Tolerance	+0,05 mm, +0,1 mm
Colours	white, black, blue
Weight	0,75 kg; 1,0kg; 2,5 kg
Filament length	ca.: 250 m/0,50 kg

Printer Settings

Nozzle temperature	195-245 °C
Nozzle size	0,2-1,2 mm
Bed temperature	max 100 °C
Bed condition	kapton, glass, tape or glue
Cooling fan	recommended up 100%
Layer height	0,2-0,8 mm
Print speed	20-80 mm/s, optimal, max 250 mm/s

This printer setting recommended for the starting, can be modified according to the printer, printed objects and required mechanical parameters.

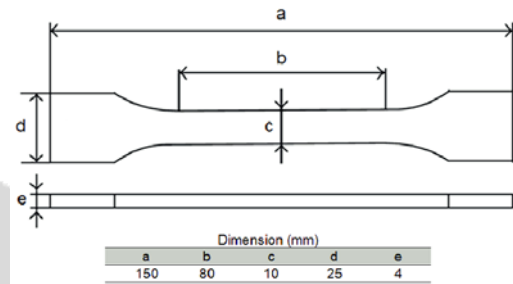
Raw Material Properties

Physical properties *	Method	PLA
Specific Gravity, g/cm ³	D792	1.24
Heat Distortion Temp (HDT)*, °C	D790	ca 82
Glass Trans. Temp, °C	D3418	55-60
Tensile Strength, MPa	ISO 527	66
Tensile Elongation, %	ISO 527	4,3
Tensile Modulus, MPa	ISO 527	4600
Notched Izod Impact, kJ/m2	ISO 180	40

*Typical properties for injection molded amorphous bars; not to be construed as specifications.

**66 psi (0.45 MPa)

Mechanical Properties of 3D Printed Specimen



Property		Test method
Tensile Strength	65 +-2 MPa	ISO 527
Tensile Modulus	4,2 +-0,1 GPa	ISO 527
Tensile Elongation	2-4 %	ISO 527
Notched Izod Impact	65 kJ / m2	ISO 180

Material Safety

RoHS compliance	yes
REACH compliance	yes

Producer

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