

SHAP3D

Diameter	mm	1.75
Tolerance	mm	0.05

Printing conditions

Nozzle temperature	°C	160 - 200
Nozzle recommendations	mm	0.4
Bed plate temperature		
PEI	°C	25 - 35
Other	°C	40 - 45
Flow	%	100 - 120
Layer thickness	mm	0.1 - 0.2
Infill	%	30 - 100
Layer fan	%	80 - 100
Auxiliary cooling fan (recommended)	%	80 - 100
Printing speed	mm/s	< 180
Max volumetric speed	mm ³ /s	< 5.5
Retraction	mm	0.5 - 1
Compatibility with Bowden drive extruder		Not recommended
Shrinkage	%	1,25

Mechanical properties at 21°C *

			Test method
Flexural modulus (21°C)	MPa	600	ISO 178
Elastic modulus	MPa	475	ISO 527-1
Tensile strength	MPa	17	ISO 527-1
Elongation at yield	%	15	ISO 527-1

General properties

			Test method
Density	g cm ⁻³	1.14	ISO 1183-1
Hardness (shore D)		59	ISO 868
Color		white - orange - black	
Odor		none	

*Printer: Bambu P1S

Nozzle temp: 160°C

Bed temp: 30°C

Infill: 100%

Layer height: 0.2 mm

Print speed: 80 mm/s

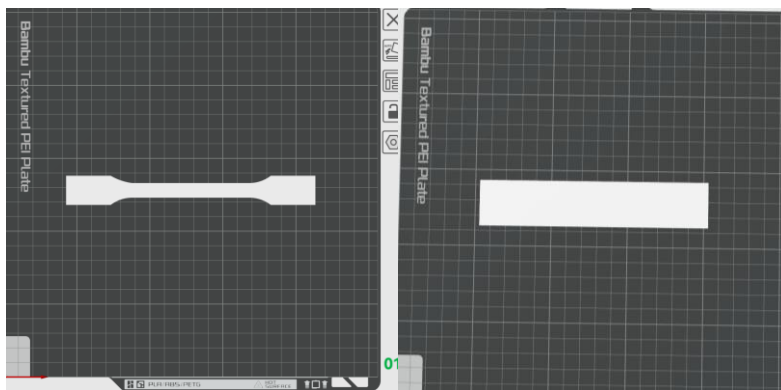


Figure 1: Printed tensile test sample

Figure 2: Printed flexural test sample

INFORMATION

The printing conditions are guidelines and depend on the 3D printing device.

The flexural modulus indicates the resistance of the material to a force causing it to bend.

The hardness indicates the resistance of the material to compression.

The elastic modulus defines the ratio of the applied tensile stress to the change in shape of the material.

The tensile strength is the pulling force required to break the material.

The material properties are tested on printed samples, thickness of 2.1 mm for flexural modulus and 3.4 mm for tensile strength and elastic modulus.

Note:

Although the information in this publication is believed to be accurate and reliable, the data shown are for guidance only. Orfit Industries gives no guarantees about the results and assumes no liability in connection with them. The properties reported here are intended primarily to facilitate comparison among Orfit products. Standard testing methods often allow alternative measuring methods. Therefore, data from other sheet manufacturers may not be directly comparable. For additional information, please contact Orfit Industries.