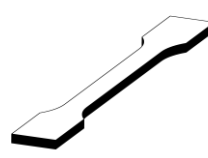


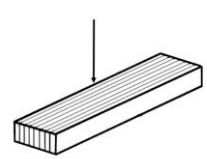
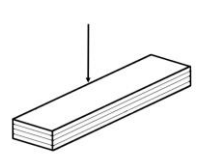
Technical Data Sheet

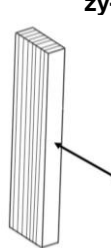
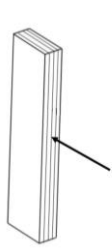
PLA PRO HT

IDENTIFICATION	
Commercial name	Fiber Force PLA PRO HT
Raw Material	PLA Compound – Polylactid Acid Compound
Use	3D printing applications
Manufacturer	FiberForce Italy srl – Vicolo Dotti 4, 31100 Treviso (ITALY)

PHYSICAL PROPERTIES	VALUE	STANDARD
Density	1,25 g/cm ³	ASTM D729

MECHANICAL PROPERTIES			
TENSILE TEST – STANDARD ISO 527			
Test specimens printed on Ultimaker 2+ with the following setup: <ul style="list-style-type: none"> - Nozzle type: standard brass - Nozzle Temperature: 210 °C - Heat bed Temp: 35 °C - Print speed: 50 mm/s - Infill orientation: 45° 			
Infill	15%	50%	100%
Tensile strength (Mpa)	22,7	27	40,8
Elastic Modulus (Mpa)	1559	1748	2436
Elongation at break (%)	3,72	4,48	4,64
Energy at break (J)	2,46	3,78	5,84

FLEXURAL TEST – STANDARD ISO 178				
Test specimens printed on Ultimaker 2+ with the following setup: <ul style="list-style-type: none"> - Nozzle type: standard brass - Nozzle Temperature: 210 °C - Heat bed Temp: 35 °C - Print speed: 50 mm/s - Infill orientation: 45° 	zy- parallel		xy- normal	
				
Infill	50%	100%	50%	100%
Flexural strength (Mpa)	73,6	91,8	72,6	90,9
Flexural Modulus (Mpa)	2488	2820	2406	2828
Deformation (%)	3,25	4,06	3,93	4,23

IMPACT TEST IZOD – STANDARD ISO 180				
Test specimens printed on Ultimaker 2+ with the following setup: <ul style="list-style-type: none"> - Nozzle type: standard brass - Nozzle Temperature: 210 °C - Heat bed Temp: 35 °C - Print speed: 50 mm/s - Infill orientation: 45° 	zy- normal		xy- parallel	
				
Infill	50%	100%	50%	100%
Impact strength (KJ/m²)	14,35	23,70	14,08	25,31
Impact Energy (J)	0,57	0,98	0,56	1,01

THERMAL PROPERTIES	VALUE	STANDARD
Melting Point	165-180 °C	ASTM D3418
Heat Deflection Temperature	> 100 °C (after post-annealing)	ASTM D684
Glass Transition Temperature	55-60 °C	ASTM D3518

REMARKS	VALUE	STANDARD
Post-annealing Guideline	20 minutes at 110 °C	N/A

FILAMENT SPECIFICATIONS AND PRINT SETTINGS	
Diameter 1.75mm	1.75 ± 0.05 mm
Diameter 2.85mm	2.85 ± 0.05 mm
Roundness deviation	max 2%
Suggested Print Temperature	190 – 220 °C
Suggested Print Speed	40 – 85 mm/s
Suggested Bed Temperature	30 – 50 °C (not necessary)