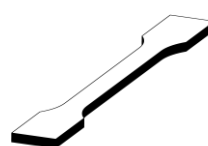


Technical Data Sheet

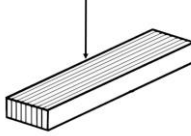
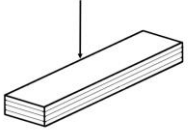
PLA HS

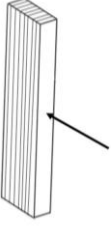
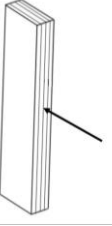
IDENTIFICATION	
Commercial name	PLA HS
Raw Material	PLA Compound
Use	3D printing applications
Manufacturer	FiberForce Italy srl – Vicolo Dotti 4, 31100 Treviso (ITALY)

PHYSICAL PROPERTIES	VALUE	STANDARD
Density	1,23 g/cc	ASTM D792

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 0.4 - Nozzle Temperature: 210 °C - Heat bed Temp: 35 °C - Print speed: 60 mm/s - Infill orientation: 45 °C - Cooling fan: 100% 	xy		
			
Infill	15%	50%	100%
Tensile strength (Mpa)	26,0	31,7	49,4
Elastic Modulus (Mpa)	1733	2040	2685
Elongation at break (%)	3,59	5,79	8,80
Energy at break (J)	2,68	6,21	14,97



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 0.4 - Nozzle Temperature: 210 °C - Heat bed Temp: 35 °C - Print speed: 60 mm/s - Infill orientation: 45 °C - Cooling fan: 100% 	zy- parallel		xy- normal	
				
Infill	50%	100%	50%	100%
Flexural strength (Mpa)	84,8	115,9	82,1	99,9
Flexural Modulus (Mpa)	2958	3398	2614	3006
Deformation (%)	3,57	4,35	4,10	4,53

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 0.4 - Nozzle Temperature: 210 °C - Heat bed Temp: 35 °C - Print speed: 60 mm/s - Infill orientation: 45 °C - Cooling fan: 100% 	zy- normal		xy- parallel	
				
Infill	50%	100%	50%	100%
Impact strength (KJ/m²)	11,78	16,46	11,29	17,15
Impact Energy (J)	0,47	0,66	0,45	0,69

THERMAL PROPERTIES	VALUE	STANDARD
Melting Range	140 – 160 °C	ASTM D3418
Heat Deflection Temp.	65 °C	ASTM D684

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	210 °C
Suggested Print Speed	50 – 200 mm/s
Suggested Bed Temperature	20 – 35 °C
Cooling fan	100%