



Technical Data Sheet

PLA+

PLA+ (PLA Plus) is a biodegradable 3D printing filament, also known as enhanced PLA.

Compared with ordinary PLA, PLA+ has better tensile strength, heat resistance and impact resistance. In addition, the surface of the model printed by PLA+ filaments is smoother, the printing accuracy is higher, and the detail is more delicate.

It should be noted that the printing temperature of PLA+ is generally between 190-220°C. At the same time, in order to obtain the best printing results, PLA+ filaments also need to be heated on the hot bed of the printer, and the appropriate adhesive or printing base plate needs to be used to ensure the adhesion of the printed item.

Physical	Condition	Test Method	Typical Value
Density		ASTM D1505	1.24 g/cm ³

Mechanical	Condition	Test Method	Typical Value
Tensile Strength	MD	ASTM D882	110.3 MPa
	TM	ASTM D882	144.7 MPa
Tensile Modulus	MD	ASTM D882	3309 MPa
	TM	ASTM D882	3861 MPa
Elongation at Break	MD	ASTM D882	160%
	TM	ASTM D882	100%
Elmendorf Tear	MD	ASTM D1922	15 g/mil
	TM	ASTM D1922	13 g/mil

Impact	Condition	Test Method	Typical Value
Spence Impact			2.5 J



Thermal	Condition	Test Method	Typical Value
Melting Point		ASTM 3418	145 - 160°C

Transmission Rates	Condition	Test Method	Typical Value
Oxygen		D1434	675 cc-mil/ m ² -24hr-atm
Carbon Dioxide		Internal	2.850 cc-mil/ m ² -24hr-atm
Water Vapor		ASTM F1249	375 g-mil/ m ² -24h

Optical	1.50 mm		HB
Haze		ASTM D1003	2.10 %
Gloss	20°C	ASTM D1003	90

Print Recommendation	
Nozzle Temperature	190 - 220 °C
Bed Temperature	45 - 60 °C
Print Speed	40 - 130 mm/s
Chamber Temperature	0 - 40 °C
Cooling Fan	0 - 100%