



Poly lactid Acid

Physical Properties	Value	Standard
Density	1,24 g/cc	ASTM D1505

Mechanical Properties

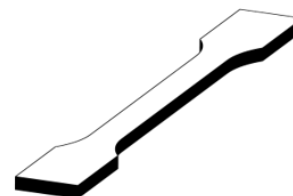
TENSILE TEST - STANDARD ISO 527

Test specimens printed on Ultimaker 2+ with the following setup:

- Nozzle type: Standard Brass
- Nozzle Temperature: 210 °C
- Heat bed Temp: 35 °C
- Print speed: 50 mm/s
- Infill orientation: 45°



xz



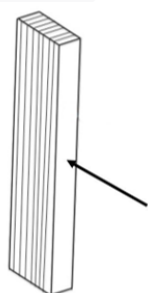
xy

INFILL	15%	50%	100%	15%	50%	100%
Tensile Strength (Mpa)	12.3	21.8	25.4	29.3	34.6	47.8
Elastic Modulus (Mpa)	1302	1639	2190	1782	2001	2467
Elongation at break (%)	1.80	2.83	2.49	3.87	4.72	4.59
Energy at break (J)	0.5	1.3	1.4	3.1	5	6.6

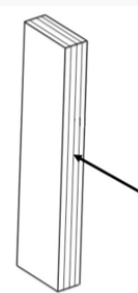
IMPACT TEST IZOD - STANDARD ISO 180

Test specimens printed on Ultimaker 2+ with the following setup:

- 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	15%	50%	100%	15%	50%	100%
Impact Strength (KJ/m ²)	10.85	11.81	15.27	11.03	11.34	17.91
Impact Energy (J)	0.43	0.47	0.61	0.44	0.45	0.72



Polylactid Acid

Thermal Properties	Value	Standard
Melting Point	145-160 °C	ASTM D3418
Glass Transition Temperature	60 °C	ASTM D3418

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	200 – 215 °C
Suggested Print Speed	40 – 85 mm/s
Suggested Bed Temperature	30 – 50 °C (not necessary)
Cooling fan	100%