PLA for 3D Printing — PLN0

The next generation Biopolymer

- Ideal for tooling, prototyping and general industrial applications
- Ideal material to replace ABS (odourless)
- Machinable
- High mechanical and impact resistance
- Consistent diameter and extremely round
- Reduced breakage for longer printing performance
- High temperature resistance (180°C melting point after annealing)

Size Specifications[a]		Units	Test Method
Nominal Diameter	1.75 / 2.85	mm	-
Diameter Tolerances	±0.05 / ±0.15	mm	-

Mechanical Properties		Units	Test Method
Tensile Modulus	2400 ± 40	MPa	ISO 527-1
Tensile Stress at Yield	35.2 ± 0.8	MPa	ISO 527-1
Tensile Stress at Break	30.0 ± 3.0	MPa	ISO 527-1
Elongation at yield	2.0 ± 0.0	%	ISO 527-1
Elongation at break	6.0 ± 2.0	%	ISO 527-1
Flexural Strength	68 ± 5	MPa	ISO 178
Flexural Modulus	2120 ± 480	MPa	ISO 178
Izod Impact Strength, notched	10 ± 3	kJ/m^2	ISO 180

[a] Property measured using the filament. All remaining properties are measured using 3D test specimens.

Thermal Properties		Units	Test Method
Melt Mass-Flow Rate	13 ± 2	g/10min	ISO 1133
Heat Deflection (HDT) at 0.455 MPa	135 ± 36	°F	ISO 75
Heat Deflection (HDT) at 1.820 MPa	129 ± 37	°F	ISO 75
Glass Transition, 1Hz	151 – 153	°F	ISO 6721
Coefficient of Thermal Expansion	8 x 10^{-5}	m/m°C	-
Melting Temperature[a]	342 ± 41	°F	ISO 11357
VICAT Softening Temperature	135 ± 36	°F	ISO 306
Printer Settings[b]		**Units**	**Test Method**
Extruder Temperature	392 – 419	°F	-
Plate Temperature	140	°F	-
Ventilation	0 – 50	%	-

[b]Recommended settings. For the best results when printing with Filkemp filaments, carefully read the 3D printer manufacturer's instructions manual.

Additional Information

Regulatory Compliance: REACH / RoHs

Spool Weight: 1kg (2.2lbs)

All filaments are supplied in vacuum-sealed packaging containing a desiccant bag

Other sizes, spool weight and packaging are available upon request

Revision: 01/2022