

PLA FLEX is a PLA compound. Specially designed for 3D printing, flexible and extreme strong and still easy to print. With excellent print properties like great bed attachment with no heating, no warping and a great shiny surface. Using PLA Flex .

USDA certified biobased product
 Industrially compostable
 high tensile strength, balanced mechanical properties of extensibility and stiffness
 translucent with pearlescent gloss
 Strong, but flexible
 Food approved EC Directives and FDA

Uses

Agricultural
 Horticultural

1. Identification of the material

Trade name	tm filament tm FLEX
Chemical name	Thermoplastic polyurethane
Use	3D printing
Origin	tm filament Netherlands

2. Physical properties

Density	g/cm ³	1.27	ISO 1183
Melt Flow Index (23°C /2.16 kg)	g/10 min)	3.7	ISO 1133
Melting temperature	°C	145-160	ISO 3146-C
Vicat A softening temperature	°C	78	ISO 306

3. Mechanical properties

Modulus of elasticity	MPa	730	ISO 527
Tensile strength	MPa	20	ISO 527
Tensile strain at tensile strength	%	> 300	ISO 527
Flexural modulus	MPa	680	ISO 178
Flexural strain at break	%	no break	ISO 178
Flexural stress at 3.5 % strain	MPa	17	ISO 178
Notched impact strength (Charpy), RT	kJ/m ²	83	ISO 179-1/1 eA
Impact Strength (Charpy), RT	kJ/m ²	no break	ISO 179-1/1 eU

4. Printer settings

Printer	Desktop FFF printer
Nozzle	0.4 mm A2 hardened
Layer height	0.2 mm
Infill	100%
Extrusion Temperature	230 - 250 °C
Bed temperature	60 - 80 °C
Bed preparation	PEI sheet, kapton
Print speed	30-40 mm/s (higher speeds may need slightly hotter printing temp, up to 250°C)

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