TECHNICAL DATA SHEET

PLA

Description

Recreus PLA is a compound based on polylactic acid and belongs to the family of thermoplastic polyesters derived from renewable resources. These come from the fermentation of agricultural by-products such as cornstarch or other carbohydrate-rich. An ideal filament for extrusion in FDM 3D printers.

Physical Property	Value	Unit	Test method according to
Material density	1,38	g/cm3	ISO 1183

Mechanical Property	Value	Unit	Test method according to
MEF Flexural Modulus Elasticity	3500	MPa	ISO 178
Tensile modulus (Young)	3400	MPa	ISO 527
Tensile strength	14	MPa	ISO 527
Elongation at break	40	%	ISO 527
Notched impact strengh (Charpy)n at +23°C	7	kJ/m2	ISO 179
Notched impact strengh (Charpy)n at -30°C	5	kJ/m2	ISO 179
Izod impact strengh (23°C notched)	NR	kJ/m2	ISO 179

Thermal Property	Value	Unit	Test method according to
HDT (01,82MPa)	50	°C	ISO 75-2

Printing properties	Recommended
Printing temperatures	215 - 225°C
Printing speed	20 - 100 mm/s
Hot-bed temperature	40-60°C
Optimal layer height	0.2 mm
Minimal nozzle diameter	0.1 (0.4 mm or higher recommended)
Retraction parameters	3.5 - 6.5 mm (speed 20 - 160 mm/s)

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