MELOVY

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TECHNICAL DATA SHEET

PLA Matte

BRIEF INTRODUCTION

PLA Matte is an innovative PLA based filament produces an unique matte finish, reduces the visibility of printed layer lines and gives a professional appearance to all prints. Special process adjustment has improved the liquidity problem. Achieves whilst enhancing the contrast between light and shadow to highlight fine details. Easy to print and various colors available to suit more applications. Achieves whilst enhancing the contrast between light and shadow to highlight fine details.

CHARACTERISTIC

Environmentally friendly | Good inter-layer bond | No buckling deformation | High melt flow rate

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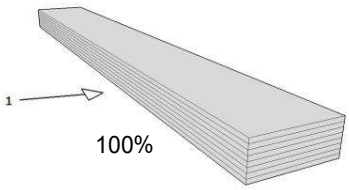
IDENTFICATION OF THE MATERIAL	
Trade name	PLA Matte
Chemical name	Polylactic Acid
Application	3D PRINTING
GUIDELINE FOR PRINT SETTINGS	
Nozzle temperature	220±10℃
Bed temperature	30~60℃
Bed modification	Tape or glue below 60℃
Active cooling fan	ON, 100%
Layer height	0.2mm
Shell thickness	≥0.8mm
Print speed	40-80mm/s

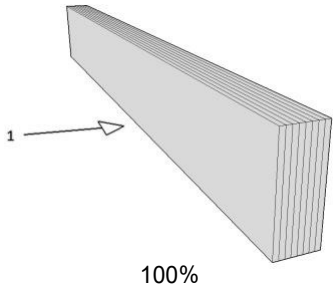
Settings are based on a 0.4mm nozzle.

MATERIAL PROPERTIES		Test Method
Melt temperature	~160℃	ISO 11357
Glass transition temperature	~60℃	ISO 11357
Melt flow rate (MFR)[1]	5~8 g/10min	ISO 1133
Heat deflection temperature(HDT)[2]	58℃	ISO 75
Vicat softening temperature(VST)[3]	57℃	ISO 306
Density	1.42~1.46 g/cm3	ISO 1183
Odor	Odorless	/
Solubility	Insoluble in water	/

1. Test conditions: T= 190℃; m=2.16 kg.
2. Test conditions:0.45MPa;120℃/h.
3. Test conditions:10N; 120℃/h.

MECHANICAL PROPERTIES|TENSILE TEST	Test Method	ISO 527
All test specimens were printed using an FlashForge Guider 2s under the following conditions：		
Printing temperature:225℃		
Heated bed temperature:50℃		
Print speed：50mm/s		
Shell thickness：0.8mm	Printed horizontal	
Infill under 45°	X,Y-axis	
Infill	100%	
Tensile strength（Mpa）	36-42	
Elongation at break（%）	2.5-3.2	

MECHANICAL PROPERTIES|IMPACT TEST	Test Method ISO 179
The same conditions as tensile test. 1→impact direction	
Infill	100%
Impact strength（KJ/m^2）	38~42
Notch impact strength[1]（KJ/m^2）	6~9

MECHANICAL PROPERTIES |FLEXURAL TEST	Test Method ISO 178
The same conditions as tensile test. 1→Bending direction	
Infill	100%
Maximum force（Mpa）	77~80
Flexural modulus（Mpa）	2000~2400

1.Notch type: Type A

FILAMENT SPECIFICATION		Test Method
Diameter 1.75mm	1.75±0.03mm	EX1125
Diameter 2.85mm	2.85±0.03mm	EX1125
Diameter 3.00mm	3.00±0.03mm	EX1125
Max roundness deviation（1.75）	0.03mm	EX1125
Max roundness deviation（2.85）	0.03mm	EX1125
Max roundness deviation（3.00）	0.03mm	EX1125
Net weight on reel	1kg	EX1125

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