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Fiche Technique

KIMYA PLA-R 3D FILAMENT

Recycled PLA additive manufacturing filament

DESCRIPTION

Kimya PLA-R is a 3D printing filament made from recycled and biodegradable PLA (Polylactic Acid), a biosourced polymer derived from corn starch. As a natural alternative to petroleum-based plastics like polyethylene, PLA-R is both eco-friendly and easy to print with. It is odorless and well-suited for a wide range of applications—from industrial uses such as packaging to everyday items, toys, prototypes, and modeling. Kimya PLA-R combines printability, sustainability, and versatility, making it a great choice for environmentally conscious 3D printing.

BENEFITS

- Consistent Print Quality
- Low Shrinkage
- Fast Printing Speed

TECHNICAL DATA

Properties	Values	Test Methods
Diameter	1.75 ± 0.1 mm 2.85 ± 0.1 mm	INS-6712
Density	1.235 g/cm^3	ISO 1183-1
Moisture rate	< 0.5 %	INS-6711
Melt flow index (MFI)	9-12 g/10min	ISO 1133-1
Glass transition temperature (Tg)	61°C (142°F)	ISO 11357-1 DSC (10°C/min-20-220°C)
Melting Temperature (Tm)	165°C (329°F)	ISO 11357-1 DSC (10°C/min-20-220°C)
Properties	**Values**	**Test Methods**
Tensile Modulus	2,818 MPa (408.7 ksi)	ISO 527-2/5A/50
Tensile Strength	55.32 MPa (8.0 ksi)	ISO 527-2/5A/50
Tensile Strain at Strength	2.1 %	ISO 527-2/5A/50
Tensile Stress at Break	41.2 MPa (6.0 ksi)	ISO 527-2/5A/50
Tensile Strain at Break (type A)	4.32 %	ISO 527-2/5A/50
Flexural Modulus	2,304 MPa (334 ksi)	ISO 178
Flexural Stress at Break	82.3 MPa (11.94 ksi)	ISO 178
Deformation at Flexural Strain	4.22 %	ISO 178
Flexural Stress at Conventional Deflection (3.5% Strain)*	81.72 MPa (11.9 ksi)	ISO 178
Charpy Impact Resistance	3.12 kJ/m^2 (1.5 ft-lbs/in^2)	ISO 179-1/1eA
Shore Hardness	75.2 D	ISO 868

PROCESSING

Printing Direction	XY
Printing Speed	Initial layers: 10-20 mm/s, further layers 30-60 mm/s
Nozzle Temperature	190°C - 210°C (374°F - 410°F)
Bed Temperature	20°C - 60°C (68°F - 140°F)

SUSTAINABILITY

Can be recycled · Contains recycled materials · Made with Bio-based materials · Recyclable packaging · Biodegradable Product

NOTES

- *According to ISO 178, end of the test at 5% deformation even if there is no specimen break.
- The data should be considered as indicative values - Properties can be influenced by production conditions.

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