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Fiche Technique

KIMYA PETG-R 3D FILAMENT

Low-cost recycled filament for FFF 3D Printers

DESCRIPTION

Kimya PETG-R is a 3D printing filament made from recycled PETG, sourced from the industrial waste of a luxury and medical packaging manufacturer. Despite being recycled, PETG-R offers technical properties like those of Kimya PETG-S, including good mechanical strength and printability. It provides an environmentally responsible alternative for users seeking sustainable materials without compromising performance.

BENEFITS

- Eco-Friendly.
- Great Mechanical Strength.
- High rigidity.

TECHNICAL DATA

Properties	Values	Test Methods
Diameter	1.75 ± 0.1 mm 2.85 ± 0.1 mm	INS-6712
Density	1.27 g/cm^3	ISO 1183-1
Melt flow index (MFI)	8 g/10min	ISO 1133-1 (@225°C-2.16kg)
Glass transition temperature (Tg)	80°C (176°F)	ISO 11357-1 DSC (10°C/min-20-300°C)
Properties	**Values**	**Test Methods**
Tensile Modulus	1,845 MPa (267.6 ksi)	ISO 527-2/1A/50
Tensile Strength	47.1 MPa (6.8 ksi)	ISO 527-2/1A/50
Tensile Strain at Strength	3.8 %	ISO 527-2/1A/50
Tensile Stress at Break	37.2 MPa (5.4 ksi)	ISO 527-2/1A/50
Tensile Strain at Break (type A)	3.6 - 13 %	ISO 527-2/5A/50
Flexural Modulus	1,746 MPa (253.2 ksi)	ISO 178
Flexural Stress at Conventional Deflection (3.5% Strain)*	6.8 MPa (8.8 ksi)	ISO 178
Charpy Impact Resistance	6.1 kJ/m^2 (2.9 ft-lbs/in^2)	ISO 179-1/1eA
Shore Hardness	75.5 D	ISO 868

PROCESSING

Printing Direction	XY
Printing Speed	Initial layers: 10-20 mm/s, further layers 30-60 mm/s
Nozzle Temperature	230°C - 260°C (446°F - 500°F)
Bed Temperature	75°C - 85°C (167°F - 185°F)

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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