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Fiche Technique

KIMYA HIPS-R 3D FILAMENT

Recycled HIPS Soluble support additive manufacturing filament

DESCRIPTION

Kimya HIPS-R is a 3D printing filament made from recycled High Impact Polystyrene (HIPS), part of the styrenic polymer family. Despite being made from recycled materials, HIPS-R maintains strong impact and heat resistance, making it a reliable and sustainable option for various applications. Its low permeability makes it well-suited for leak-proof containers, while its solubility in D-limonene sets it apart from other filaments - allowing it to be used as a dissolvable support material. Kimya HIPS-R is commonly used in packaging, household appliances, and dual-extrusion printing setups.

BENEFITS

- Dissolvable.
- Durable.
- Sustainable Choice.

TECHNICAL DATA

Properties	Values	Test Methods
Diameter	1.75 ± 0.1 mm	INS-6712
Density	1.03 g/cm^3	ISO 1183-1
Moisture rate	< 0.5 %	INS-6711
Melt flow index (MFI)	4.7 - 7.1 g/10min	ISO 1133-1 (@200°C-5kg)
Glass transition temperature (Tg)	97°C (207°F)	ISO 11357-1 DSC (10°C/min-20-260°C)
Properties	**Values**	**Test Methods**
Tensile Modulus	1,273 MPa (185 ksi)	ISO 527-2/5A/50
Tensile Strength	23.7 MPa (3.4 ksi)	ISO 527-2/5A/50
Tensile Strain at Strength	1.5 %	ISO 527-2/5A/50
Tensile Stress at Break	16.7 MPa (2.4 ksi)	ISO 527-2/5A/50
Tensile Strain at Break (type A)	11.5 %	ISO 527-2/5A/50
Flexural Modulus	1,533 MPa (222 ksi)	ISO 178
Flexural Stress at Conventional Deflection (3.5% Strain)*	36.2 MPa (5.25 ksi)	ISO 178
Charpy Impact Resistance	7.2 kJ/m^2 (3.42 ft-lbs/in^2)	ISO 179-1/1eA
Shore Hardness	76.6 D	ISO 868

PROCESSING

Printing Direction	XY
Printing Speed	Initial layers: 20-30 mm/s, further layers 45-60 mm/s
Nozzle Temperature	240°C - 260°C (464°F - 500°F)
Bed Temperature	90°C - 100°C (194°F - 212°F)

SUSTAINABILITY

Can be recycled

Contains recycled materials

100% Recycled materials

Recyclable packaging

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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