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Fiche Technique

KIMYA PETG CARBON 3D FILAMENT

PETG/Carbon Fibre additive manufacturing filament

DESCRIPTION

Kimya PETG Carbon is a 3D printing filament made from PETG reinforced with carbon fibres. This combination enhances the mechanical performance of standard PETG by significantly increasing its rigidity and strength. As a result, PETG Carbon is particularly well-suited for producing technical parts that require dimensional stability and durability. It is especially valued in the automotive sector for functional components where performance and precision are key.

BENEFITS

- High rigidity.
- Easy to print.
- Wide range of applications.

TECHNICAL DATA

Properties	Values	Test Methods
Diameter	1.75 ± 0.1 mm 2.85 ± 0.1 mm	INS-6712
Density	1.28 g/cm^3	ISO 1183-1
Melt flow index (MFI)	6.5 - 10 g/10min	ISO 1133-1 (@225°C-2.16kg)
Glass transition temperature (Tg)	78°C (172°F)	ISO 11357-1
Properties	**Values**	**Test Methods**
Tensile Modulus	7,773.3 MPa (1127.4 ksi)	ISO 527-2/1A/50
Tensile Strength	92.9 MPa (13.5 ksi)	ISO 527-2/1A/50
Tensile Strain at Strength	1.9 %	ISO 527-2/1A/50
Tensile Stress at Break	92.9 MPa (13.5 ksi)	ISO 527-2/1A/50
Tensile Strain at Break (type A)	1.9 %	ISO 527-2/1A/50
Flexural Modulus	5,664 MPa (821.5 ksi)	ISO 178
Deformation at Flexural Strain	4.2 %	ISO 178
Flexural Strength*	138 MPa (20.0 ksi)	ISO 178
Flexural Stress at Conventional Deflection (3.5% Strain)*	120.6 MPa (17.5 ksi)	ISO 178
Flexural Stress at Break	42.2 MPa (6.1 ksi)	ISO 178
Deformation at Flexural Strength	3.1 %	ISO 178
Charpy Impact Resistance	4.6 kJ/m^2 (2.2 ft-lbs/in^2)	ISO 179-1/1eA
Shore Hardness	78.8 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	85°C - 95°C (185°F - 203°F)

SUSTAINABILITY





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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