



Kimya PEKK Carbon 3D Filament

The Kimya **PEKK Carbon** 3D filament belongs to the polyaryletherketone family. Polyetherketoneketone (**PEKK**) is a thermoplastic polymer reinforced with carbon fiber. This combination gives it a high level of rigidity and heat-resistance. It can be used as a material in components exposed to acids and hydrocarbons, such as fuel and lubricants, and also to produce components located in engine housings. The Kimya PEKK Carbon 3D filament has the following properties:

- Temperature resistance
- Reinforced with carbon fiber
- Complies with the **REACH** standard

2-year ARMOR warranty.

FILAMENT PROPERTIES

PROPERTIES	TEST METHODS	VALUES
Diameter	INS-6712	1,75 ± 0,1 mm 2,85 ± 0,1 mm
Density	ISO 1183-1	1,27 g/cm ³
Moisture rate	INS-6711	< 1 %
Glass transition temperature (T_g)	ISO 11357-1 DSC (10°C/min - 20-410°C)	160 °C

PRINT PARAMETERS AND SPECIMENS DIMENSIONS

PRINTING DIRECTION	XY
Printing Speed	20-40 mm/s
Infill	100% - rectilinear
Infill Angle	45°/-45°
Nozzle Temperature	350-390°C
Bed T°	110-150°C

PRINTED SPECIMENS PROPERTIES

	PROPERTIES	TEST METHODS	VALUES
THERMAL PROPERTIES	Maximum use T°	-	150 °C
ELECTRICAL PROPERTIES	Dielectric constant	IEC 60243-1 (100µm)	84 KV/mm
	Surface resistivity	ASTM D257	10 ¹⁶ Ohms/m ²
MECHANICAL PROPERTIES	Tensile modulus	ISO 527	2 900 MPa
	Tensile Strength	ISO 527	39,1 MPa
	Tensile strain at break	ISO 527	3 %
	Flexural modulus	ISO 178	2 924 MPa
	Flexural strength*	ISO 178	85.9 %
	Charpy impact resistance	ISO 179-1/1eA	5 kJ/m ²
Note 1	*Fin de l'essai à 5% d'allongement d'après la norme ISO 178 même si l'éprouvette ne rompt pas.		
Note 2	Les données doivent être considérées comme des valeurs indicatives - Les propriétés peuvent être influencées par les conditions de production.		

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