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Fiche Technique

KIMYA PEKK-SC 3D FILAMENT

Heat-resistant and high – performance filament for FFF 3D Printers

DESCRIPTION

Kimya PEKK-SC is a high-performance 3D printing filament made from polyetherketoneketone (PEKK), a semi-crystalline thermoplastic in the polyaryletherketone family. The semi-crystalline structure of PEKK-SC provides enhanced heat resistance, making it ideal for use in extreme environments. It combines excellent mechanical strength with resistance to abrasion and harsh chemicals, including acids, fuels, and lubricants. PEKK-SC is also compatible with smoke and fire safety standards, making it suitable for critical applications in aerospace, automotive, and industrial sectors.

BENEFITS

- Flame retardant.
- Aerospace Standard.
- Excellent Temperature and Chemical Resistance.

TECHNICAL DATA

Properties	Values	Test Methods
Diameter	1.75 ± 0.1 mm	INS-6712
Density	1.27 g/cm^3 (0.046 lb/in^3)	ISO 1183-1
Moisture Rate	< 0.5 %	INS-6711
Melt flow index (MFI)	35 g/10 min	ISO 1133-1(@380°C-5kg)
Glass transition temperature (Tg)	161°C (322°F)	ISO 11357-1 DSC (10°C/min-20-410°C)
Melting Temperature (Tm)	332°C (630°F)	ISO 11357-1 DSC (10°C/min-20-410°C)
Properties	**Values**	**Test Methods**
Maximum use Temperature	260°C (500°F)	-
Heat Distortion Temperature (HDT) (1.8Mpa)	172°C (342°F)	ISO 75
Dielectric Strength	84 KV/mm	IEC 60243-1 (100µm)
Relative Permittivity	2.6	IEC 60250 (1 MHz)
Loss Tangent	0.007	IEC 60250 (1 kHz)
Surface Resistivity	10^{16} Ω/sq	ASTM D257
Volume Resistivity	10^{16} Ω/sq	ASTM D257
Tensile Modulus	3,400 MPa (493.1 ksi)	ISO 527-2/1A/50
Tensile Strength	115 MPa (16.7 ksi)	ISO 527-2/1A/50
Tensile Strain at Strength	5.5 %	ISO 527-2/1A/50
Tensile Strain at Break (type A)	7.5 %	ISO 527-2/1A/50

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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