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Fiche Technique

KIMYA PEI-9085 3D FILAMENT

Heat-resistant, abrasion-resistant filament for FFF 3D Printers

DESCRIPTION

Kimya PEI-9085 is a 3D printing filament made from polyetherimide (PEI), an amorphous thermoplastic from the polyimide family. It offers excellent resistance to high temperatures and abrasion, along with outstanding dimensional stability. These properties make it particularly well-suited for demanding industrial applications. Kimya PEI-9085 is commonly used in aerospace, railway, electronics, and transport sectors where performance under stress and strict tolerances are critical.

BENEFITS

- Flame retardant.
- Aerospace Standard.
- High Temperature Resistant.

TECHNICAL DATA

Properties	Values	Test Methods
Diameter	1.75 ± 0.1 mm	INS-6712
Density	1.28 g/cm^3	ISO 1183-1
Melt flow index (MFI)	8 - 12 g/10 min	ISO 1133-1(@295°C-6.7kg)
Glass transition temperature (Tg)	178°C (352°F)	ISO 11357-1 DSC (10°C/min-0-420°C)
Properties	**Values**	**Test Methods**
Heat Distortion Temperature (HDT) (1.8Mpa)	152°C (306°F)	ASTM D648
Tensile Modulus	2,322.5 MPa (336.9 ksi)	ISO 527-2/1A/50
Tensile Strength	69.7 MPa (10.1 ksi)	ISO 527-2/1A/50
Tensile Strain at Strength	6.2 %	ISO 527-2/1A/50
Tensile Stress at Break	69.7 MPa (10.1 ksi)	ISO 527-2/1A/50
Tensile Strain at Break (type B et C)	6.2 %	ISO 527-2/1A/50
Flexural Modulus	2,250 MPa (326 ksi)	ISO 178
Deformation at Flexural Strain	> 5 %	ISO 178
Flexural Stress at Conventional Deflection (3.5% Strain)*	74.5 MPa (10.8 ksi)	ISO 178
Charpy Impact Resistance	11 kJ/m^2 (5.231 ft-lbs/in^2)	ISO 179/2C
Shore Hardness	78.7 D	ISO 868

PROCESSING

Printing Direction	XY
Printing Speed	20-30 mm/s
Nozzle Temperature	350°C - 360°C (662°F - 680°F)
Chamber Temperature	170°C - 180°C (338°F - 356°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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