

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

Diameter	1.75 ± 0.1 mm
Density	1.28 g/cm ³
Melt flow index (MFI)	8 - 12 g/10 min
Glass transition temperature (Tg)	178°C (352°F)

Test Methods

INS-6712
ISO 1183-1
ISO 1133-1 (@295°C-6.7kg)
ISO 11357-1 DSC (10°C/min-0-420°C)

Properties

Heat Distortion Temperature (HDT) (1.8Mpa)	152°C (306°F)
Tensile Modulus	2,322.5 MPa (336.9 ksi)
Tensile Strength	69.7 MPa (10.1 ksi)
Tensile Strain at Strength	6.2 %
Tensile Stress at Break	69.7 MPa (10.1 ksi)
Tensile Strain at Break (type B et C)	6.2 %
Flexural Modulus	2,250 MPa (326 ksi)
Deformation at Flexural Strain	> 5 %
Flexural Stress at Conventional Deflection (3.5% Strain)*	74.5 MPa (10.8 ksi)
Charpy Impact Resistance	11 kJ/m ² (5.231 ft-lbs/in ²)
Shore Hardness	78.7 D

Test Methods

ASTM D648
ISO 527-2/1A/50
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ISO 178
ISO 178
ISO 178
ISO 179/2C
ISO 868

PROCESSING

Printing Direction

Printing Speed	XY 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.