

Fiche Technique

KIMYA PEI-1010 3D FILAMENT

Flame resistant and industry-ready Filament for FFF 3D printers

DESCRIPTION

Kimya PEI-1010 is a 3D printing filament made from polyetherimide (PEI), an amorphous thermoplastic belonging to the polyimide family. Known for its excellent resistance to high temperatures and chemicals, PEI-1010 also offers outstanding dimensional stability, making it ideal for precision applications. It is widely used in demanding industries such as electronics, transportation, and medical, where mechanical strength and thermal reliability are essential.

BENEFITS

- UV and Chemical Resistance.
- Flame retardant.
- Dimensional Stability.

TECHNICAL DATA**Properties**

Diameter

Density

Melt flow index (MFI)

Glass transition temperature (Tg)

Values

1.75 ± 0.1 mm

2.85 ± 0.1 mm

1.28 g/cm³ (0.046 lb/in³)

14 - 16 g/10 min

217°C (423°F)

Test Methods

INS-6712

ISO 1183-1

ISO 1133-1(@340°C-5kg)

ISO 11357-1 DSC (10°C/min-0-420°C)

Properties

Tensile Modulus

Tensile Strength

Tensile Strain at Strength

Tensile Stress at Break

Tensile Strain at Break (type A)

Tensile Strain at Break (type B et C)

Flexural Modulus

Deformation at Flexural Strain

Flexural Stress at Conventional

Deflection (3.5% Strain)*

Charpy Impact Resistance

Shore Hardness

Values

2,917.5 MPa (423.1 ksi)

90.9 MPa (13.2 ksi)

5.6 %

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5.6 %

5.6 %

2,236 MPa (324.3 ksi)

> 5 %

76 MPa (11 ksi)

3.1 kJ/m² (1.5 ft-lbs/in²)

84.5 D

Test Methods

ISO 527

ISO 527-2/1A/50

ISO 527-2/1A/50

ISO 527-2/1A/50

ISO 527-2/1A/50

ISO 527-2/1A/50

ISO 178

ISO 178

ISO 178

ISO 179-1/1eA

ISO 868

PROCESSING**Printing Direction**

Printing Speed

Nozzle Temperature

Chamber Temperature

XY

35-45 mm/s

375°C - 390°C (707°F - 734°F)

215°C - 225°C (419°F - 437°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.