

Fiche Technique

KIMYA PEBA-S 3D FILAMENT

Flexible and high-elongation filament for FFF 3D printers

DESCRIPTION

Kimya PEBA-S is a 3D printing filament made from PEBA (Polyether Block Amide), a thermoplastic elastomer known for its exceptional flexibility and energy return. Produced through the polycondensation of a polyamide and a polyether, PEBA-S stands out with an elongation at break greater than 550%, making it the most flexible material in the Kimya range. Its elasticity and rebound properties make it ideal for sports equipment and impact-absorbing parts.

BENEFITS

- Flexible.
- Great Impact resistance.
- Lightweight.

TECHNICAL DATA**Properties**

Diameter

Density

Moisture Rate

Melt flow index (MFI)

Melting Temperature (T_m)**Values**

1.75 ± 0.1 mm

2.85 ± 0.1 mm

1.013 g/cm³ (0.036 lb/in³)

< 1 %

13.6 g/10 min

149°C (300°F)

Test Methods

INS-6712

ISO 1183-1

ISO-6711

ISO 1133-1(@190°C-2.16kg)

ISO 11357-1 DSC
(10°C/min- -90-190°C)**Properties**

Tensile Modulus

Tensile Strength

Tensile Strain at Strength

Tensile Stress at Break

Tensile Strain at Break (type A)

Flexural Modulus

Flexural Stress at Conventional
Deflection (3.5% Strain)*

Charpy Impact Resistance

Shore Hardness

Values

63 MPa (9.1 ksi)

32.8 MPa (4.76 ksi)

> 550 %

32.3 MPa (4.68 ksi)

> 550 %

70 MPa (10 ksi)

2.4 MPa (0.35 ksi)

No Break

93 A

Test Methods

ISO 37/2/500

ISO 37/2/500

ISO 37/2/500

ISO 37/2/500

ISO 37/2/500

ISO 178

ISO 178

ISO 179-1/1eA

ISO 868

PROCESSING**Printing Direction**

Printing Speed

Nozzle Temperature

Bed Temperature

XY

44 mm/s

235°C - 245°C (455°F - 473°F)

80°C - 90°C (176°F - 194°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.