

Fiche Technique

KIMYA PETG-S 3D FILAMENT

Low-cost filament for FFF 3D Printers

DESCRIPTION

Kimya PETG-S is a 3D printing filament made from PETG (Polyethylene Terephthalate Glycol). It is a durable, flexible polyester that offers a good balance between strength and flexibility, and it also allows for prints with higher clarity or translucency. Thanks to its low cost, PETG is an economical choice for a wide range of applications.

BENEFITS

- Good Chemical Resistance.
- Low Moisture Absorbtion.
- Excellent Layer Adhesion.

TECHNICAL DATA

Properties

Diameter

Values

1.75 ± 0.1 mm
2.85 ± 0.1 mm

Density

1.278 g/cm³

Moisture Rate

< 1 %

Melt flow index (MFI)

12.1 g/10min

Glass transition temperature (Tg)

80°C (176°F)

Test Methods

INS-6712

ISO 1183-1

INS-6711

ISO 1133-1 (@225°C-2.16kg)

ISO 11357-1 DSC (10°C/min-20-300°C)

Properties

Tensile Modulus

XY

2,158 MPa (313.0 ksi)

Tensile Strength

52.2 MPa (7.6 ksi)

Tensile Strain at Strength

3.4 %

Tensile Stress at Break

52.2 MPa (7.6 ksi)

Tensile Strain at Break (type A)

3.4 %

Flexural Modulus

1,850 MPa (268.3 ksi)

Deformation at Flexural Strain

0 %

Flexural Strength*

0 MPa (0 ksi)

Flexural Stress at Conventional Deflection (3.5% Strain)*

69.7 MPa (10.1 ksi)

Flexural Stress at Break

0 MPa (0 ksi)

Deformation at Flexural Strength

0 %

Charpy Impact Resistance

3.991 kJ/m² (1.9 ft-lbs/in²)

Shore Hardness

76.6 D

ZX

2,057.5 MPa (298.4 ksi)

39.3 MPa (5.7ksi)

2.3 %

39.3 MPa (5.7ksi)

2.3 %

1,636 MPa (237.3 ksi)

4.4 %

63.9 MPa (9.3 ksi)

58.9 MPa (8.5 ksi)

63.9 MPa (9.3 ksi)

4.5 %

1.4 kJ/m² (0.7 ft-lbs/in²)

74.1 D

Test Methods

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 178

ISO 178

ISO 178

ISO 179-1/1eA

ISO 868

PROCESSING

Printing Direction

Printing Speed

Nozzle Temperature

Bed Temperature

XY

Initial layers: 10-20 mm/s, further layers 30-60 mm/s

230°C - 260°C (446°F - 500°F)

75°C - 85°C (167°F - 185°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.