

Fiche Technique

KIMYA ABS KEVLAR 3D FILAMENT

ABS/Aramid Fibre additive manufacturing filament

DESCRIPTION

Kimya ABS Kevlar is a 3D printing filament made from ABS (Acrylonitrile Butadiene Styrene) reinforced with aramid fibers. As part of the styrenic polymer family, this composite material retains the toughness of standard ABS while offering enhanced performance thanks to the aramid fiber reinforcement. The result is a filament with significantly improved abrasion resistance and mechanical durability. Kimya ABS Kevlar is ideal for producing tools and finished parts that require long-term wear resistance and strength under stress.

BENEFITS

- High Abrasion Resistance.
- Enhanced Mechanical Durability.
- Reliable for End-Use Parts.

TECHNICAL DATA

Properties

Diameter	1.75 ± 0.1 mm 2.85 ± 0.1 mm
Density	1.036 g/cm ³
Moisture rate	< 0.5 %
Melt flow index (MFI)	35 g/10min
Glass transition temperature (Tg)	108°C (226°F)

Values

1.75 ± 0.1 mm 2.85 ± 0.1 mm
1.036 g/cm ³
< 0.5 %
35 g/10min
108°C (226°F)

Test Methods

INS-6712
ISO 1183-1
INS-6711
ISO 1133-1 (@220°C-10kg)
ISO 11357-1 DSC (10°C/min-20-280°C)

Properties

Tensile Modulus	2,168 MPa (314 ksi)
Tensile Strength	34.1 MPa (4.94 ksi)
Tensile Strain at Strength	2.1 %
Tensile Stress at Break	30 MPa (4.35 ksi)
Tensile Strain at Break (type A)	6.5 %
Flexural Modulus	1,976 MPa (286.6 ksi)
Flexural Stress at Conventional Deflection (3.5% Strain)*	56.36 MPa (8.2 ksi)
Charpy Impact Resistance	7.54 kJ/m ² (3.58 ft-lbs/in ²)
Shore Hardness	73.5 D

Values

2,168 MPa (314 ksi)
34.1 MPa (4.94 ksi)
2.1 %
30 MPa (4.35 ksi)
6.5 %
1,976 MPa (286.6 ksi)
56.36 MPa (8.2 ksi)
7.54 kJ/m ² (3.58 ft-lbs/in ²)
73.5 D

Test Methods

ISO 527-2/5A/50
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ISO 178
ISO 178
ISO 179-1/1eA
ISO 868

PROCESSING

Printing Direction

Printing Speed	Initial layers: 10-15 mm/s, further layers 30-50 mm/s
Nozzle Temperature	210°C - 230°C (410°F - 446°F)
Bed Temperature	85°C - 95°C (185°F - 203°F)

XY

Initial layers: 10-15 mm/s, further layers 30-50 mm/s
210°C - 230°C (410°F - 446°F)
85°C - 95°C (185°F - 203°F)

SUSTAINABILITY

Can be
recycledRecyclable
packaging

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.