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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	Values	Test Methods
Diameter	1.75 ± 0.1 mm 2.85 ± 0.1 mm	INS-6712
Density	1.036 g/cm^3	ISO 1183-1
Moisture rate	< 0.5 %	INS-6711
Melt flow index (MFI)	35 g/10min	ISO 1133-1 (@220°C-10kg)
Glass transition temperature (Tg)	108°C (226°F)	ISO 11357-1 DSC (10°C/min-20-280°C)
Properties	**Values**	**Test Methods**
Tensile Modulus	2,168 MPa (314 ksi)	ISO 527-2/5A/50
Tensile Strength	34.1 MPa (4.94 ksi)	ISO 527-2/5A/50
Tensile Strain at Strength	2.1 %	ISO 527-2/5A/50
Tensile Stress at Break	30 MPa (4.35 ksi)	ISO 527-2/5A/50
Tensile Strain at Break (type A)	6.5 %	ISO 527-2/5A/50
Flexural Modulus	1,976 MPa (286.6 ksi)	ISO 178
Flexural Stress at Conventional Deflection (3.5% Strain)*	56.36 MPa (8.2 ksi)	ISO 178
Charpy Impact Resistance	7.54 kJ/m^2 (3.58 ft-lbs/in^2)	ISO 179-1/1eA
Shore Hardness	73.5 D	ISO 868

PROCESSING

Printing Direction	XY
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)

SUSTAINABILITY

Can be recycled

Recyclable 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.

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