Kimya ABS Kevlar 3D Filament

The Kimya **ABS Kevlar** 3D filament belongs to the styrenic polymer family. Acrylonitrile Butadiene Styrene Kevlar (**ABS Kevlar**) is a composite filament enriched in aramid fibers. It offers properties that are superior to a standard ABS. It provides the printed parts with increased resistance to abrasion. It is used for finished parts and tools. The Kimya ABS Kevlar 3D filament has the following properties:

- Low warpage - compared to ABS-S-
- Lighter-weight printed parts - compared to ABS Carbon-
- Complies with the **REACH** regulation and the **RoHS** directive

2-year KIMYA warranty.
Store away from light, humidity and heat to maintain the properties of the product.

FILAMENT PROPERTIES

PROPERTIES	TEST METHODS	VALUES
Diameter	INS-6712	1.75 ± 0.1 mm 2.85 ± 0.1 mm
Density	ISO 1183-1	1.036 g/cm3
Moisture rate	INS-6711	< 0.5 %
Melt flow index (MFI)	ISO 1133-1 (@220°C – 10 kg)	35 g/10min
Glass transition temperature (Tg)	ISO 11357-1 DSC (10°C/min - 20-280°C)	108 °C

PRINT PARAMETERS AND SPECIMENS DIMENSIONS

PRINTING DIRECTION	XY
Printing Speed	10 mm/s
Infill	100% - rectilinear
Infill Angle	0°/0°
Nozzle Temperature	220°C
Bed T°	90°C

PRINTED SPECIMENS PROPERTIES

	PROPERTIES	TEST METHODS	VALUES
MECHANICAL PROPERTIES	Tensile modulus	ISO 527-2/5A/50	2,168 MPa
	Tensile Strength	ISO 527-2/5A/50	34.1 MPa
	Tensile strain at strength	ISO 527-2/5A/50	2.1 %
	Tensile Stress at Break	ISO 527-2/5A/50	30 MPa
	Tensile strain at break (type A)	ISO 527-2/5A/50	6.5 %
	Flexural modulus	ISO 178	1,976 MPa
	Flexural stress at conventional deflection (3,5% strain)*	ISO 178	56.36 MPa
	Charpy impact resistance	ISO 179-1/1eA	7.54 kJ/m^2
	Shore Hardness	ISO 868	73,5D

Note 1	*According to ISO 178, end of the test at 5% deformation even if there is no specimen break.
Note 2	The data should be considered as indicative values - Properties can be influenced by production conditions.

Created on 13/02/2018 - Revised on 13/03/2023.

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