Kimya ABS Carbon 3D Filament

The Kimya **ABS Carbon** 3D filament belongs to the styrenic polymer family. Acrylonitrile-butadiene-styrene-carbon (**ABS Carbon**) is a mixture of ABS and carbon fibers. The carbon fibers give the filament improved rigidity compared to a standard ABS. This filament is highly valued by manufacturers of drones and by modeling aficionados. It is also used to make tools. The Kimya ABS Carbon 3D filament has the following properties:

- No shrinkage
- Better tensile modulus than ABS-S
- Less warpage than ABS-S
- Complies with the REACH standard

2-year KIMYA warranty.

FILAMENT PROPERTIES

PROPERTIES	TEST METHODS	VALUES
Diameter	INS-6712	1.75 ± 0.1 mm 2.85 ± 0.1 mm
Density	ISO 1183-1	1.045 g/cm3
Moisture rate	INS-6711	< 0.5 %
Melt flow index (MFI)	ISO 1133-1 (@220°C – 10 kg)	17.4 g/10min
Glass transition temperature (Tg)	ISO 11357-1 DSC (10°C/min - 20-220°C)	108 °C

PRINT PARAMETERS AND SPECIMENS DIMENSIONS

PRINTING DIRECTION	XY
Printing Speed	50-60 mm/s
Infill	100% - rectilinear
Infill Angle	45°/-45°
Nozzle Temperature	245-260°C
Bed T°	90-95°C

PRINTED SPECIMENS PROPERTIES

	PROPERTIES	TEST METHODS	VALUES
MECHANICAL PROPERTIES	Tensile modulus	ISO 527-2/5A/50	2,665 MPa
	Tensile Strength	ISO 527-2/5A/50	35.7 MPa
	Tensile Stress at Break	ISO 527-2/5A/50	37.5 MPa
	Tensile strain at break (type A)	ISO 527	2 %
	Flexural modulus	ISO 178	1,809 MPa
	Deformation at Flexural Strain	ISO 178	>5 %
	Flexural stress at conventional deflection (3,5% strain)*	ISO 178	51.4 MPa
	Charpy impact resistance	ISO 179-1/1eA	6.2 kJ/m²
	Shore Hardness	ISO 868	72.7D

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.

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KIMYA SAS - 20 RUE CHEVREUL
44105 NANTES – FRANCE
TEL. : 02 40 38 40 00 – EMAIL : kimya@armor-group.com
www.armor-group.com/kimya