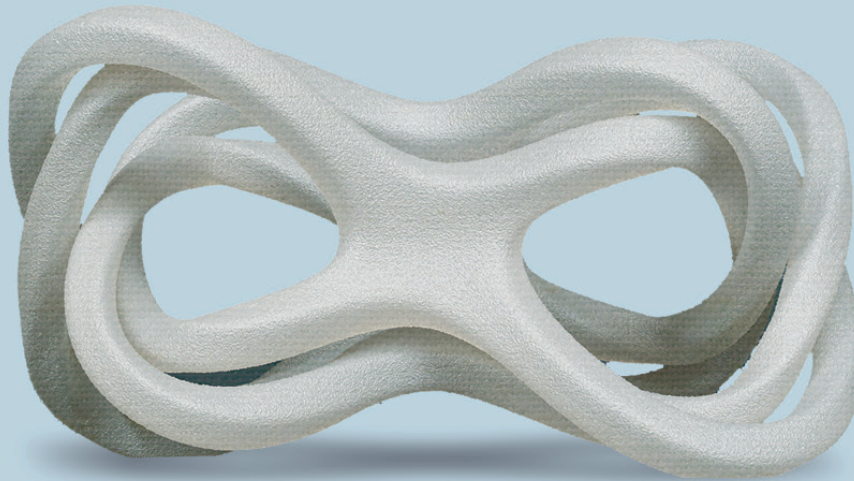




## PETG CARBON KIMYA



**PETG CARBON** has an excellent tensile modulus. PETG is reinforced with carbon fibers

| NO DELAMINATION | HIGH RIGIDITY

| REINFORCMENT | POST-PRINTING PROCESSES POSSIBLE

### FILAMENT PROPERTIES

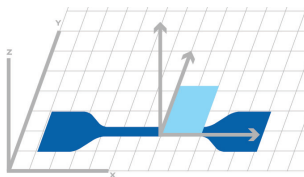
DESCRIPTION	TEST METHODS	UNITS	VALUES
Diameter	INS-6712	mm	1.75 ± 0.1 2.85 ± 0.1
Density	ISO 1183	g/cm <sup>3</sup>	1.317
Humidity rate	INS-6711	ppm	< 10,000
MFI (@225°C – 2.16 kg)	ISO 1133	g/10min	9.7
Glass temperature tg	ISO 11357 DSC (10°C/min – 20 à 280°C)	°C	76
Melting temperature tf	ISO 11357 DSC (10°C/min – 20 à 280°C)	°C	n/a

## PRINT PARAMETERS AND SPECIMENS DIMENSIONS

<b>PRINT AXIS</b>	XY
<b>PRINT SPEED</b>	50 mm/s
<b>INFILL</b>	100% - rectilinear
<b>INFILL ANGLE</b>	45°/-45°
<b>EXTRUSION TEMPERATURE</b>	225°C
<b>PLATFORM TEMPERATURE</b>	60°C

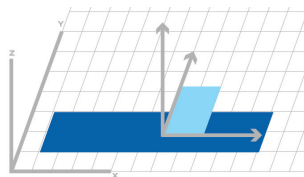
## RESULTS

### TENSILE TEST



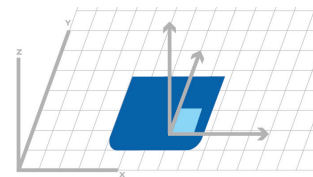
Dim.(mm): 75x12.5x2  
Specimen type: ISO 527-5A

### BENDING TEST - CHARPY IMPACT



Dim. (mm): 80x10x4

### HARDNESS



Dim.(mm): 45x45x4

## PRINTED SPECIMENS PROPERTIES

	PROPERTIES	TEST METHODS	UNITS	VALUES
<b>TENSILE TEST</b>	Tensile modulus	ISO 527	MPa	4,015
	Tensile strength	ISO 527	MPa	52.9
	Elongation @tensile strength	ISO 527	%	2.4
	Tensile stress @break	ISO 527	MPa	41.3
	Tensile elongation @break	ISO 527	%	3.4
<b>BENDING TEST</b>	Flexural modulus	ISO 178	MPa	2,987
	Flexural stress @3.5%	ISO 178	MPa	80.4
	Flexural strength	ISO 178	MPa	>80
	Deformation @flexural strength	ISO 178	%	>4*
<b>CHARPY IMPACT</b>	Charpy impact strength (notched type A)	ISO 179	kJ/m <sup>2</sup>	4.03
<b>HARDNESS</b>	Hardness	ISO 868	Shore D	76.4

\*According to ISO 178, end of the test at 5% deformation even if there is no specimen break

The results presented are the averaged values of the PETG CARBON 1.75mm range.  
For each test, 5 specimens per reference, previously placed at least 24 hours in climatic chamber (23°C - hygrométrie : 50%) have been tested.