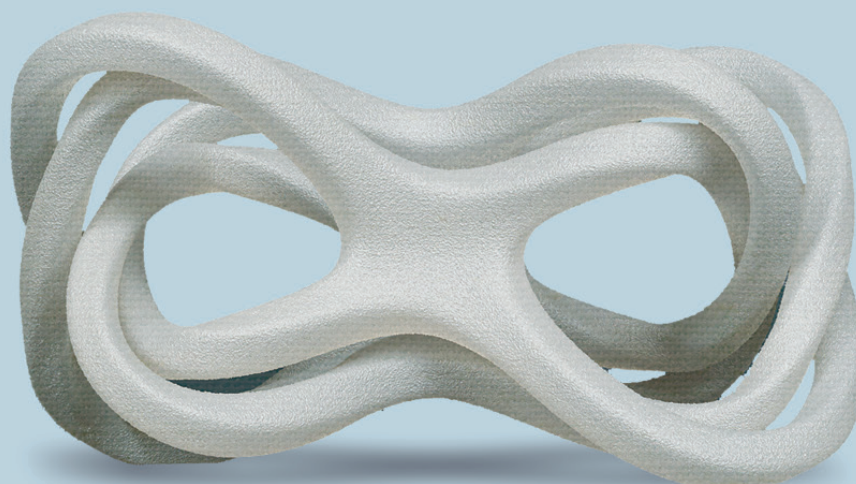




## ABS CARBON KIMYA



**ABS CARBON FILAMENT** improves interlayer adhesion and increases compression strength

| **NO SHRINKAGE** | **BETTER TENSILE MODULUS THAN ABS**  
| **BETTER INTERLAYER ADHESION** | **LIGHT WEIGHT OBJECTS**

### FILAMENT PROPERTIES

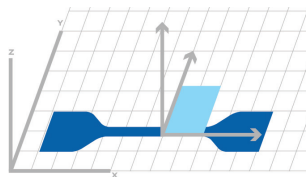
DESCRIPTION	TEST METHODS	UNITS	VALUES
Diameter	INS-6712	mm	1.75 ± 0.1 2.85 ± 0.1
Density	ISO 1183	g/cm <sup>3</sup>	1.032
Humidity rate	INS-6711	ppm	< 6,000
MFI (@220°C – 10 kg)	ISO 1133	g/10min	35.7
Glass temperature tg	ISO 11357 DSC (10°C/min – 20 à 220°C)	°C	100
Melting temperature tf	ISO 11357 DSC (10°C/min – 20 à 220°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>	260°C
<b>PLATFORM TEMPERATURE</b>	100°C

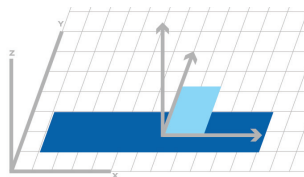
## RESULTS

### TENSILE TEST



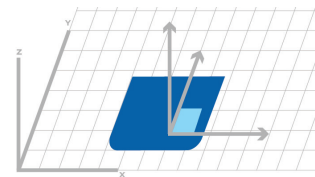
Dim.(mm): 75x12.5x2  
Specimen type: ISO 527-5A

### 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	2,189
	Tensile strength	ISO 527	MPa	37.4
	Elongation @tensile strength	ISO 527	%	2.2
	Tensile stress @break	ISO 527	MPa	33.2
	Tensile elongation @break	ISO 527	%	3.1
<b>BENDING TEST</b>	Flexural modulus	ISO 178	MPa	1,822
	Flexural stress @3.5%	ISO 178	MPa	56.6
	Deformation @flexural strength	ISO 178	%	>5*
<b>CHARPY IMPACT</b>	Charpy impact strength (notched type A)	ISO 179	kJ/m2	7.3
<b>HARDNESS</b>	Hardness	ISO 868	Shore D	72.2

\*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 ABS 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.