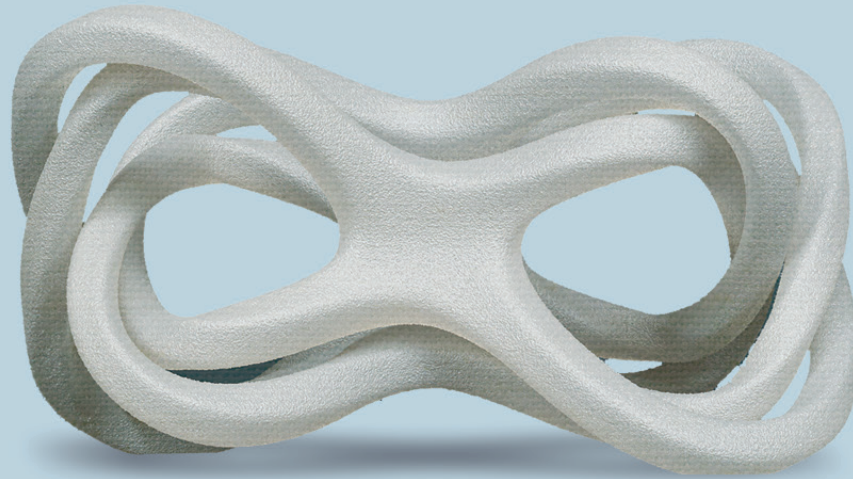




ABS CARBON KIMYA



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 1183-1	g/cm ³	1.032
Moisture rate	INS-6711	ppm	< 6,000
Melt Flow Index (MFI) (@220°C – 10 kg)	ISO 1133-1	g/10min	35.7
Glass transition temperature Tg	ISO 11357-1 DSC (10°C/min – 20 à 220°C)	°C	100
Melting temperature Tm	ISO 11357-1 DSC (10°C/min – 20 à 220°C)	°C	n/a

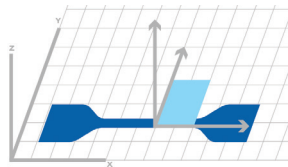


PRINT PARAMETERS AND SPECIMENS DIMENSIONS

PRINTING DIRECTION	XY
PRINTING SPEED	50 mm/s
INFILL	100% - rectilinear
INFILL ANGLE	45°/-45°
EXTRUSION TEMPERATURE	260°C
BED TEMPERATURE	100°C

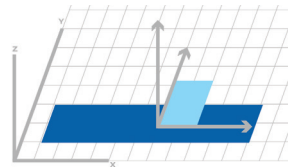
RESULTS

TENSILE TEST



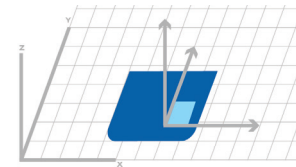
Dim.(mm): 75x12.5x2
Specimen type: ISO 527-5A

BENDING TEST - CHARPY IMPACT



Dim. (mm): 80x10x4

HARDNESS



Dim.(mm): 45x45x4

PRINTED SPECIMENS PROPERTIES

	PROPERTIES	TEST METHODS	UNITS	VALUES
TENSILE TEST	Tensile modulus	ISO 527-2/5A/50	MPa	2,189
	Strength	ISO 527-2/5A/50	MPa	37.4
	Strain at Strength	ISO 527-2/5A/50	%	2.2
	Stress at break	ISO 527-2/5A/50	MPa	33.2
	Strain at break	ISO 527-2/5A/50	%	3.1
BENDING TEST	Flexural modulus	ISO 178	MPa	1,822
	Flexural stress at conventionnal deflection (3,5% strain)*	ISO 178	MPa	56.6
	Flexural strain at flexural strength	ISO 178	%	>5*
CHARPY IMPACT	Charpy impact resistance	ISO 179-1/1eA	kJ/m ²	7.3
HARDNESS	Shore 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