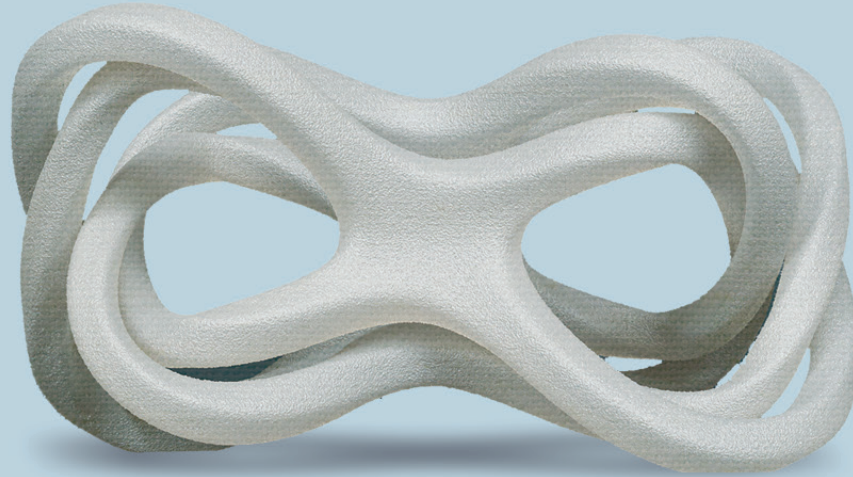




PETG CARBON KIMYA



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

| NO DELAMINATION | HIGH RIGIDITY

| REINFORCEMENT | 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 1183-1	g/cm ³	1.317
Moisture rate	INS-6711	%	< 10,000
Melt Flow Index (MFI) (@225°C – 2.16 kg)	ISO 1133-1	g/10min	9.7
Glass transition temperature Tg	ISO 11357-1 DSC (10°C/min – 20 à 280°C)	°C	76
Melting temperature Tm	ISO 11357-1 DSC (10°C/min – 20 à 280°C)	°C	n/a

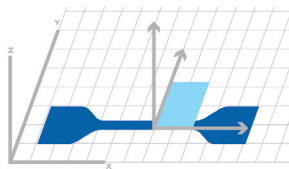


PRINT PARAMETERS AND SPECIMENS DIMENSIONS

PRINTING DIRECTION	XY
PRINTING SPEED	50 mm/s
INFILL	100% - rectilinear
INFILL ANGLE	45°/-45°
EXTRUSION TEMPERATURE	225°C
BED TEMPERATURE	60°C

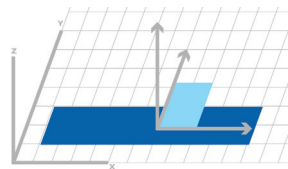
RESULTS

TENSILE TEST



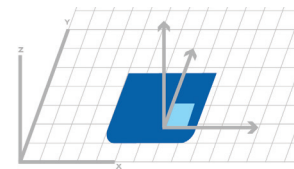
Dim.(mm): 75x12.5x2
Specimen type: ISO 527-5A

BENDING TEST - CHARPY IMPACT



Dim. (mm): 80x10x4

HARDNESS



Dim.(mm): 45x45x4

PRINTED SPECIMENS PROPERTIES

	PROPERTIES	TEST METHODS	UNITS	VALUES
TENSILE TEST	Tensile modulus	ISO 527-2/5A/50	MPa	4,015
	Strength	ISO 527-2/5A/50	MPa	52.9
	Strain at Strength	ISO 527-2/5A/50	%	2.4
	Stress at break	ISO 527-2/5A/50	MPa	41.3
	Strain at break	ISO 527-2/5A/50	%	3.4
BENDING TEST	Flexural modulus	ISO 178	MPa	2,987
	Flexural stress at conventional deflection (3,5% strain)*	ISO 178	MPa	80.4
	Flexural strength	ISO 178	MPa	>80
	Flexural strain at flexural strength	ISO 178	%	>4*
CHARPY IMPACT	Charpy impact resistance	ISO 179-1/1eA	kJ/m ²	4.03
HARDNESS	Shore 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