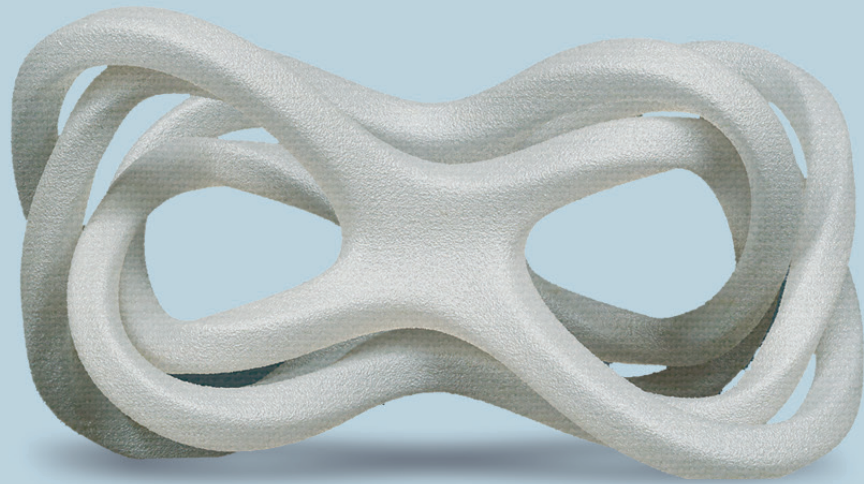




TPC-91A KIMYA



KIMYA FLEXIBLE FILAMENT OF THE FAMILY OF THERMOPLASTIC ELASTOMERS COPOLYESTERS

| FLEXIBILITY | EASY TO PRINT | LENGTHENING > 500%

FILAMENT PROPERTIES

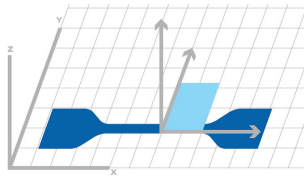
DESCRIPTION	TEST METHODS	UNITS	VALUES
Diameter	INS-6712	mm	1.75 ± 0.1 2.85 ± 0.1
Density	ISO 1183-1	g/cm ³	1.22
Moisture rate	INS-6711	%	< 1
Melt Flow Index (MFI) (@210°C – 2,16 kg)	ISO 1133-1	g/10min	18 - 20
Melting temperature Tm	ISO 11357-1 DSC (10°C/min – 20 à 220°C)	°C	160

PRINT PARAMETERS AND SPECIMENS DIMENSIONS

PRINTING DIRECTION	XY
PRINTING SPEED	44 mm/s
INFILL	100% - rectilinear
INFILL ANGLE	45°/-45°
EXTRUSION TEMPERATURE	260°C
BED TEMPERATURE	60°C

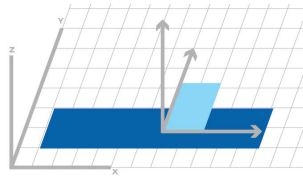
RESULTS

TENSILE TEST



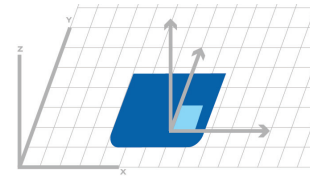
Dim.(mm) : 75x12.5x2
Specimen type: ISO 527-5A

BENDING TEST - CHARPY IMPACT



Dim. (mm) : 80x10x4

HARDNESS



Dim.(mm) : 45x45x4

PRINTED SPECIMENS PROPERTIES

PROPERTIES	TEST METHODS	UNITS	VALUES
TENSILE TEST			
Tensile modulus	ISO 37/2/500	MPa	67
Strength	ISO 37/2/500	MPa	17.7
Strain at Strength	ISO 37/2/500	%	> 500
Stress at break	ISO 37/2/500	MPa	17.5
Strain at break	ISO 37/2/500	%	> 500
BENDING TEST			
Flexural modulus	ISO 178	MPa	66
Flexural stress at conventional deflection (3,5% strain)*	ISO 178	MPa	2.6
*According to ISO 178, end of the test at 5% deformation even if there is no specimen break			
CHARPY IMPACT			
Charpy impact resistance	ISO 179-1/1eA	kJ/m ²	No break
HARDNESS			
Shore Hardness	ISO 868	Shore A	91