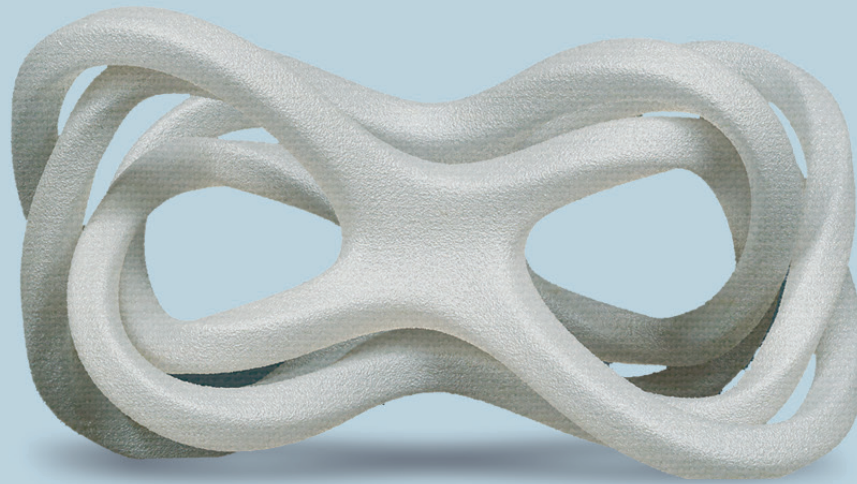




TPU-92A KIMYA



TPU-92A FILAMENT OFFERS THE POSSIBILITY TO PRINT FLEXIBLE OBJECTS AND RESISTS TO DIFFERENT SOLVENTS

| **ELASTIC** | **ABRASION RESISTANCE**
| **CHEMICAL RESISTANCE** | **FLEXIBLE**

FILAMENT PROPERTIES

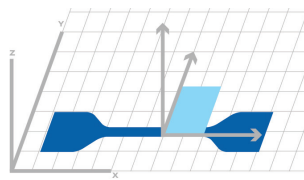
DESCRIPTION	TEST METHODS	UNITS	VALUES
Diameter	INS-6712	mm	1.75 ± 0.15 2.85 ± 0.15
Density	ISO 1183-1	g/cm ³	1.159
Moisture rate	INS-6711	ppm	< 10,000
Melt Flow Index (MFI) (@210°C - 2.16 kg)	ISO 1133-1	g/10min	16.5
Glass transition temperature T _g	ISO 11357-1 DSC (20°C/min - 20 à 220°C)	°C	n/a
Melting temperature T _m	ISO 11357-1 DSC (20°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	245°C
BED TEMPERATURE	85°C

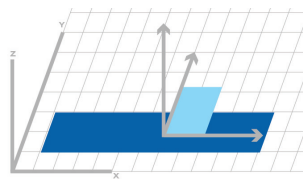
RESULTS

TENSILE TEST



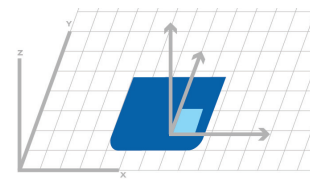
Dim.(mm): 75x12.5x2
Specimen type: ISO 527-5A

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	90
	Strength	ISO 37/2/500	MPa	43.1
	Strain at Strength	ISO 37/2/500	%	350
	Stress at break	ISO 37/2/500	MPa	41.7
	Strain at break	ISO 37/2/500	%	351.6
BENDING TEST	Flexural modulus	ISO 178	MPa	81
	Flexural stress at conventional deflection (3,5% strain)*	ISO 178	MPa	3.0
	Flexural strain at flexural strength	ISO 178	%	>5*
CHARPY IMPACT	Charpy impact resistance	ISO 179-1/1EA	kJ/m ²	no break
HARDNESS	Shore Hardness	ISO 868	Shore A	92.0

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

CERTIFICATION

FOOD CONTACT APPROVAL

EU 10/2011 (for all colors) & **FDA 21 CFR** (for all colors except black)