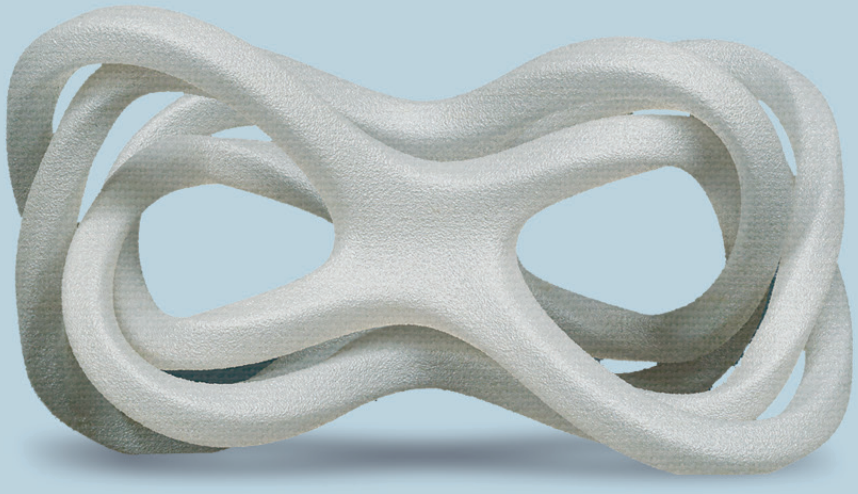
TPU-92A



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	g/cm3	1.159
Humidity rate	INS-6711	ppm	< 10,000
MFI (@210°C – 2.16 kg)	ISO 1133	g/10min	16.5
Glass temperature tg	ISO 11357 DSC (20°C/min – 20 à 220°C)	°C	n/a
Melting temperature tf	ISO 11357 DSC (20°C/min – 20 à 220°C)	°C	n/a

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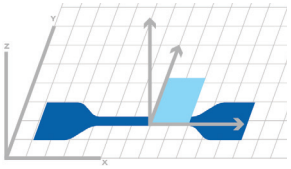
PRINT PARAMETERS AND SPECIMENS DIMENSIONS

PRINT AXIS	XY
PRINT SPEED	50 mm/s
INFILL	100% - rectilinear
INFILL ANGLE	45°/-45°
EXTRUSION TEMPERATURE	245°C
PLATFORM TEMPERATURE	85°C

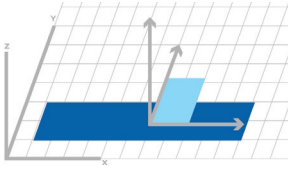
RESULTS

TENSILE TEST



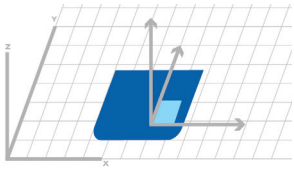
Dim.(mm): 75x12.5x2
Specimen type: ISO 527-5A

BENDING TEST - CHARPY IMPACT



Dim. (mm): 80x10x4

HARDNESS



Dim.(mm): 45x45x4

PRINTED SPECIMENS PROPERTIES

	PROPERTIES	TEST METHODS	UNITS	VALUES
TENSILE TEST	Tensile modulus	ISO 527	MPa	90
	Tensile strength	ISO 527	MPa	43.1
	Elongation @tensile strength	ISO 527	%	350
	Tensile stress @break	ISO 527	MPa	41.7
	Tensile elongation @break	ISO 527	%	351.6
BENDING TEST	Flexural modulus	ISO 178	MPa	81
	Flexural stress @3.5%	ISO 178	MPa	3.0
	Deformation @flexural strength	ISO 178	%	>5*
CHARPY IMPACT	Charpy impact strength (notched type A)	ISO 179	kJ/m2	no break
HARDNESS	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)

The results presented are the averaged values of the TPU-92A 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.

ARMOR USA, INC
2900 EARHART COURT
HEBRON KY, 41048
TEL. : 859 689 2100 – EMAIL : KIMYA@ARMOR-GROUP.COM
WWW.ARMOR-GROUP.COM/KIMYA