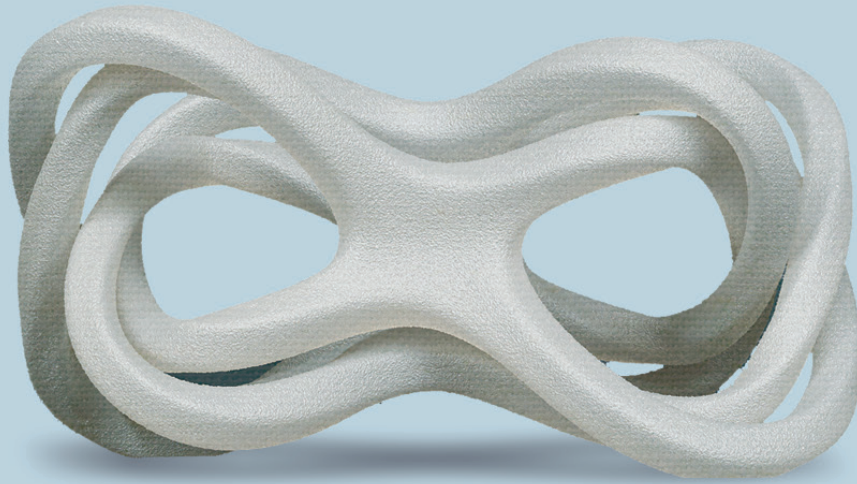




## KIMYA ABS KEVLAR



ABS KEVLAR has been designed for 3D printing by a precise formulation of aramid fibers into ABS materials

| NO SHRINKAGE | LOW WARPING  
| SMOOTH SURFACE | LIGHT WEIGHT OBJECTS

### FILAMENT PROPERTIES

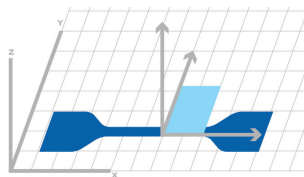
DESCRIPTION	TEST METHODS	UNITS	VALUES
Diameter	INS-6712	mm	1.75 ± 0.1 2.85 ± 0.1
Density	ISO 1183-1	g/cm <sup>3</sup>	1.036
Moisture rate	INS-6711	%	< 0.5
Melt Flow Index (MFI)	ISO 1133-1	g/10min	35
Glass transition temperature (Tg)	ISO 11357-1 DSC (10°C/min – 20 à 220°C)	°C	100

## 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

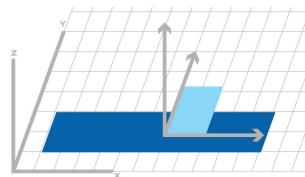
## RESULTS

TENSILE TEST



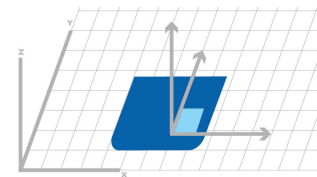
Dim.(mm): 75x12.5x2  
Specimen type: ISO 527-5A

BENDING TEST - CHARPY IMPACT



Dim. (mm): 80x10x4

HARDNESS



Dim.(mm): 45x45x4

## PRINTED SPECIMENS PROPERTIES

	PROPERTIES	TEST METHODS	UNITS	VALUES
MECHANICAL PROPERTIES	Tensile modulus	ISO 527-2/5A/50	MPa	2,188
	Tensile strength	ISO 527-2/5A/50	MPa	30.4
	Tensile strain at strength	ISO 527-2/5A/50	%	1.8
	Tensile stress at break	ISO 527-2/5A/50	MPa	27.7
	Tensile strain at break	ISO 527-2/5A/50	%	4.9
	Flexural modulus	ISO 178	MPa	1,509
	Flexural stress at conventionnal deflection (3,5% strain)**	ISO 178	MPa	44.9
	Flexural strength	ISO 178	%	>4.4*
	Charpy impact resistance	ISO 179-1/1eA	kJ/m <sup>2</sup>	5.1
	Shore Hardness	ISO 868	Shore D	70.1

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

\*\* The data should be considered as indicative values - Properties can be influenced by production conditions.