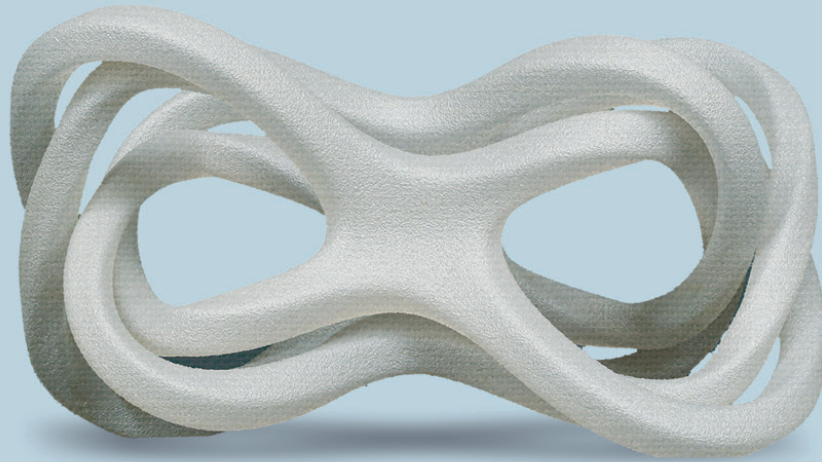




ABS-EC KIMYA



THE ELECTRICALLY CONDUCTIVE **ABS** BASED **FILAMENT FROM KIMYA**

**ELECTRICAL CONDUCTOR (SURFACE RESISTIVITY $<10^6$
OHMS/SQ) | BETTER TEMPERATURE RESISTANCE THAN PLA
(90°C) | IMPACT RESISTANCE**

FILAMENT PROPERTIES

DESCRIPTION	TEST METHODS	UNITS	VALUES
Diameter	INS-6712	mm	1,75 +/- 0,1 2,85 +/- 0,1
Density	ISO 1183	g/cm3	1,035
Moisture rate	INS-6711	%	<0,5
Melt Flow Index (MFI) (@280°C – 10 kg)	ISO 1133	g/10min	8-16
Glass transition temperature Tg	ISO 11357 DSC (10°C/min – 20 à 300°C)	°C	108



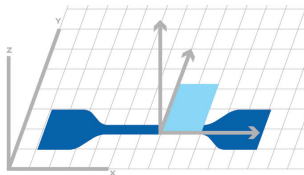
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PRINT PARAMETERS AND SPECIMENS DIMENSIONS

PRINTING DIRECTION	XY
PRINTING SPEED	45 mm/s
INFILL	100% - rectilinear
INFILL ANGLE	45°/-45°
EXTRUSION TEMPERATURE	260°C
BED TEMPERATURE	95°C

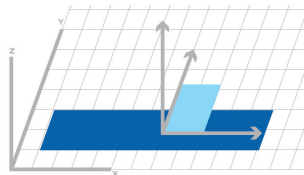
RESULTS

TENSILE TEST



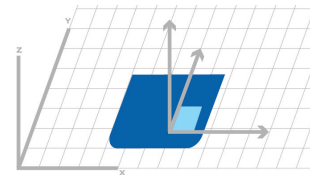
Dim.(mm): 75x12.5x2
Specimen type: ISO 527-5A

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	2398
	Strength	ISO 527-2/5A/50	MPa	36,7
	Strain at Strength	ISO 527-2/5A/50	%	2,3
	Stress at break	ISO 527-2/5A/50	MPa	29,2
	Strain at break	ISO 527-2/5A/50	%	5,2
BENDING TEST	Flexural modulus	ISO 178	MPa	1393
	Flexural stress at conventionnal deflection (3,5% strain)*	ISO 178	MPa	49,3
	Flexural strain @ break	ISO 178	%	>5
CHARPY IMPACT	Charpy impact resistance	ISO 179-1/1eA	kJ/m ²	27,6
HARDNESS	Shore Hardness	ISO 868	Shore D	67,2
ELECTRICAL PROPERTIES	Surface resistivity	ATSM D257	ohms/sq	<10 ⁶

Representative



TEC, Inc.

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