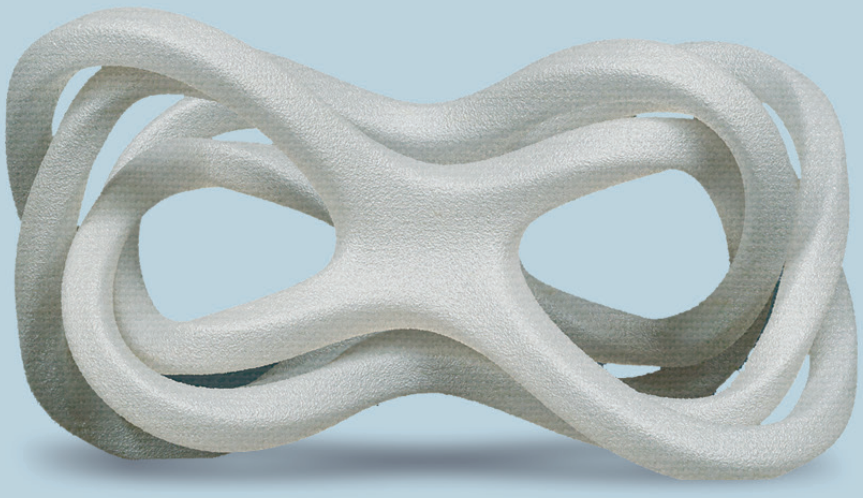
KIMYA **TPC**-ESD



TPC-ESD filament has excellent flexibility, chemical resistance and toughness. It has also been developed to ensure better electrical conductivity.

| FLEXIBILITY | EASY TO PRINT
| ELONGATION > 400% | ESD PROTECTION

FILAMENT PROPERTIES

DESCRIPTION	TEST METHODS	UNITS	VALUES
Diameter	INS-6712	mm	1.75 ± 0.1
Density	ISO 1183-1	g/cm³	1,20
Moisture rate	INS-6711	%	< 1
Melt Flow Index (MFI) (@210°C – 2.16 kg)	ISO 1133-1	g/10min	21 - 25
Melting temperature (Tm)	ISO 11357-1 DSC (10°C/min – 20 to 220°C)	°C	160

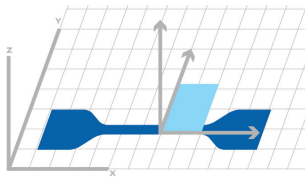
KIMYA
Additive Manufacturing by ARMOR

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

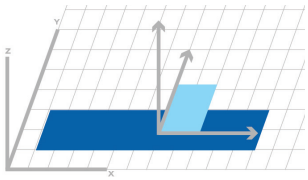
RESULTS

TENSILE TEST



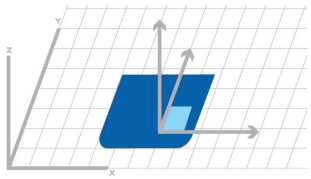
Dim.(mm): 75x12.5x2
Specimen type: ISO 527-5A

BENDING TEST - CHARPY IMPACT



Dim. (mm): 80x10x4

HARDNESS



Dim.(mm): 45x45x4

PRINTED SPECIMENS PROPERTIES

	PROPERTIES	TEST METHODS	UNITS	VALUES
MECHANICAL PROPERTIES	Surface resistivity	ASTM D257	Ohms/sq	10^7 - 10^9
	Tensile modulus	ISO 37/2/500	MPa	46
	Tensile Strength	ISO 37/2/500	MPa	13,1
	Tensile strain at strength	ISO 37/2/500	%	>400
	Tensile stress at break	ISO 37/2/500	MPa	12,8
	Tensile strain at break	ISO 37/2/500	%	>400
	Flexural modulus	ISO 178	MPa	54
	Flexural stress at conventionnal deflection (3,5% strain)**	ISO 178	MPa	2
	Charpy impact resistance	ISO 179-1/1eA	kJ/m²	No break
	Shore Hardness	ISO 868	Shore A	91

*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.

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