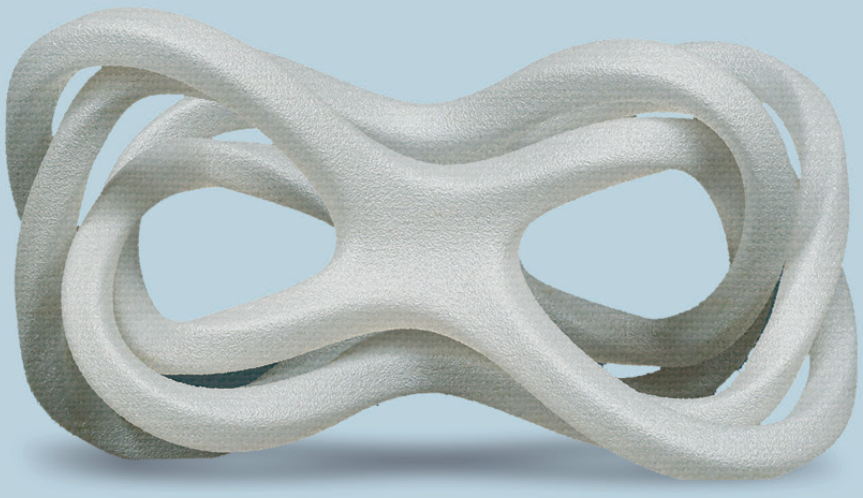
KIMYA **TPU**-R



KIMYA FLEXIBLE FILAMENT TPU-R
made of 100% recycled material.

| FLEXIBILITY | 100% RECYCLED MATERIAL

FILAMENT PROPERTIES

DESCRIPTION	TEST METHODS	UNITS	VALUES
Diameter	INS-6712	mm	1.75 +/- 0.1
Density	ISO 1183-1	g/cm^3	1,14
Moisture rate	INS-6711	%	<1
Melt Flow Index (MFI)	ISO 1133-1 (200°C - 5 kg)	g/10min	42 - 45
Glass transition temperature (Tg)	-	°C	-33

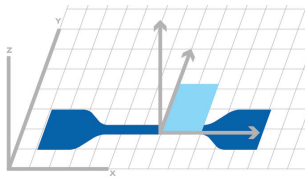
KIMYA
Additive Manufacturing by AREOR

PRINT PARAMETERS AND SPECIMENS DIMENSIONS

PRINTING DIRECTION	XY
PRINTING SPEED	33 mm/s
INFILL	100% - rectilinear
INFILL ANGLE	45°/-45°
NOZZLE TEMPERATURE	210°C
BED TEMPERATURE	85°C

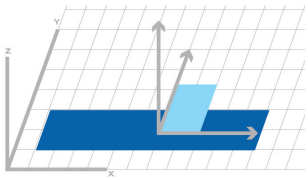
RESULTS

TENSILE TEST



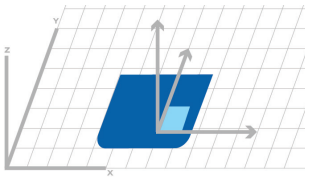
Dim.(mm): 75x12.5x2
Specimen type: ISO 527-5A

BENDING TEST - CHARPY IMPACT



Dim. (mm): 80x10x4

HARDNESS



Dim.(mm): 45x45x4

PRINTED SPECIMENS PROPERTIES

	PROPERTIES	TEST METHODS	UNITS	VALUES
MECHANICAL PROPERTIES	Tensile Modulus	ISO 37/2/500	MPa	55,2
	Tensile strength	ISO 37/2/500	MPa	27,7
	Tensile strain at strength	ISO 37/2/500	%	>300
	Tensile stress at break	ISO 37/2/500	MPa	27,4
	Tensile strain at break	ISO 37/2/500	%	>300
	Flexural modulus	ISO 178	MPa	45,6
	Flexural stress @conventionnal deflection (3,5% strain)**	ISO 178	MPa	1,9
	Charpy impact resistance	ISO 179-1/1eA	kJ/m²	No break
	Shore Hardness	ISO 868	Shore A	90

*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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