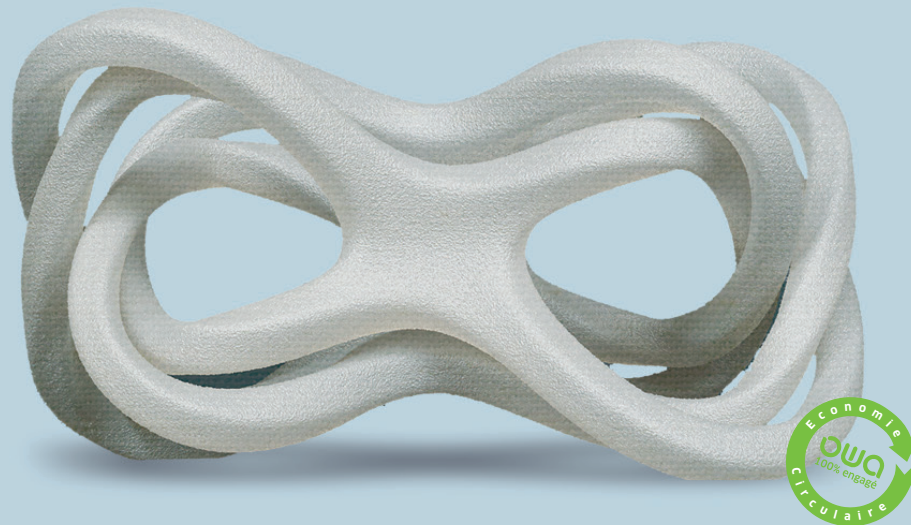




# PLA-R



**PLA-R** is a recycled filament for prototypes, design printings. PLA-R Natural is biodegradable eligible.

| **EASY TO PRINT** | **SHINY APPEARANCE**  
| **≥ 97 % RECYCLED MATERIAL** | **NO ODOR**

## FILAMENT PROPERTIES

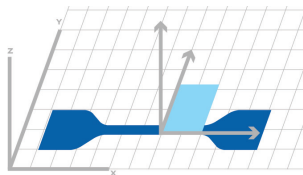
DESCRIPTION	TEST METHODS	UNITS	VALUES
Diameter	INS-6712	mm	1.75 ± 0.1 2.85 ± 0.1
Density	ISO 1183	g/cm3	1.24
Humidity rate	INS-6711	%	< 1
MFI (@210°C – 2,16 kg)	ISO 1133	g/10min	9 - 12
Glass temperature tg	ISO 11357 DSC (10°C/min – 20 à 220°C)	°C	61

## PRINT PARAMETERS AND SPECIMENS DIMENSIONS

<b>PRINT AXIS</b>	XY
<b>PRINT SPEED</b>	50 mm/s
<b>INFILL</b>	100% - rectilinear
<b>INFILL ANGLE</b>	45°/-45°
<b>EXTRUSION TEMPERATURE</b>	200°C
<b>PLATFORM TEMPERATURE</b>	60°C

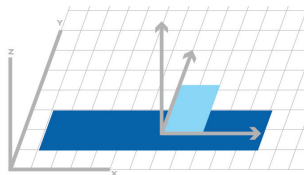
## RESULTS

### TENSILE TEST



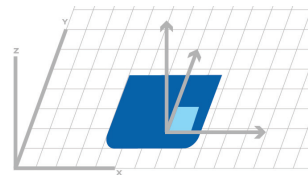
Dim.(mm): 75x12.5x2  
Specimen type: ISO 527-5A

### BENDING TEST - CHARPY IMPACT



Dim. (mm): 80x10x4

### HARDNESS



Dim.(mm): 45x45x4

## PRINTED SPECIMENS PROPERTIES

	PROPERTIES	TEST METHODS	UNITS	VALUES
<b>TENSILE</b>	Tensile modulus	ISO 527	MPa	2,963
	Tensile strength	ISO 527	MPa	57.9
	Elongation @tensile strength	ISO 527	%	2.2
	Tensile stress @break	ISO 527	MPa	47.3
	Tensile elongation @break	ISO 527	%	4.0
<b>BENDING</b>	Flexural modulus	ISO 178	MPa	2,675
	Flexural stress @3.5%	ISO 178	MPa	88.8
	Flexural strength	ISO 178	MPa	91.6
	Deformation @flexural strength	ISO 178	%	4.3
<b>CHARPY IMPACT</b>	Charpy impact strength (notched type A)	ISO 179	kJ/m2	3.22
<b>HARDNESS</b>	Hardness	ISO 868	Shore D	79.1

## CERTIFICATION

<b>% RECYCLED</b>	<b>≥ 97 % Recycled</b>
<b>% RECYCLED (FOR PLA-R NATURAL ONLY)</b>	<b>100 % Recycled</b>
<b>BIODEGRADABILITY (FOR PLA-R NATURAL ONLY)</b>	<b>NF EN 13432 &amp; NF EN14995 (for a thickness of 1mm)</b>

The results presented are the averaged values of the PLA-R 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.