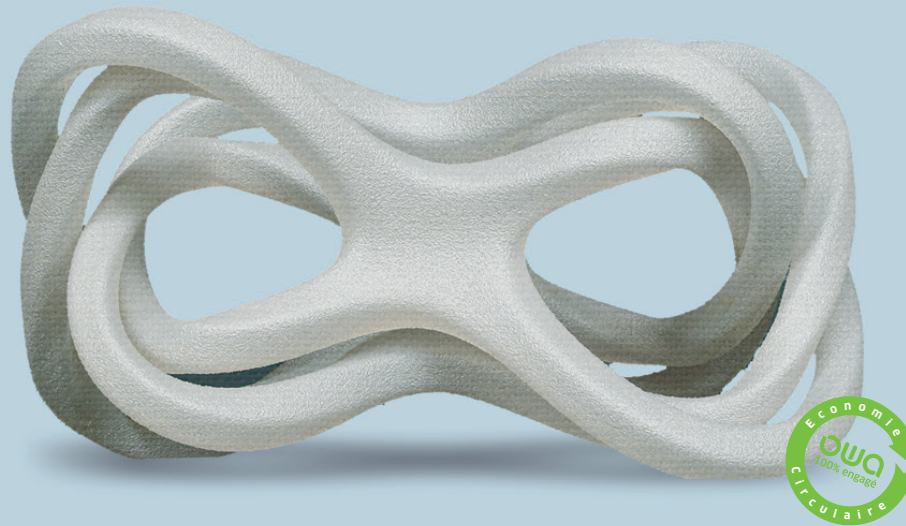




# PLA-R



**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**

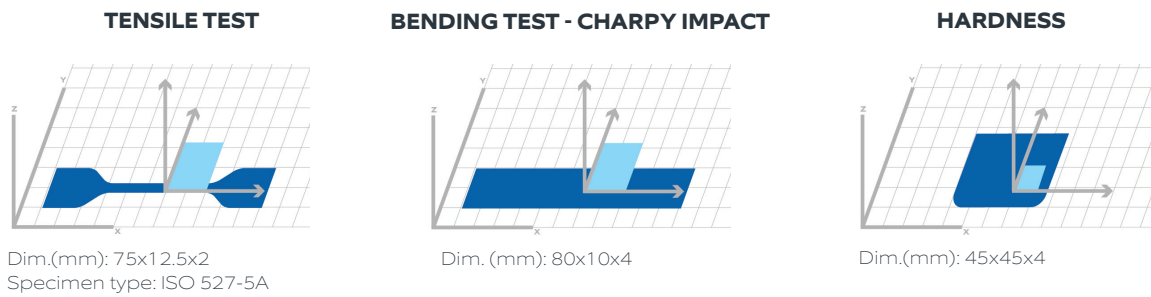
## FILAMENT PROPERTIES

DESCRIPTION	TEST METHODS	UNITS	VALUES
Diameter	INS-6712	mm	1.75 ± 0.1
			2.85 ± 0.1
Density	ISO 1183-1	g/cm <sup>3</sup>	1.24
Moisture rate	INS-6711	%	< 1
Melt Flow Index (MFI) (@210°C - 2,16 kg)	ISO 1133-1	g/10min	9 - 12
Glass transition temperature Tg	ISO 11357-1 DSC (10°C/min - 20 à 220°C)	°C	61

## PRINT PARAMETERS AND SPECIMENS DIMENSIONS

<b>PRINTING DIRECTION</b>	XY
<b>PRINTING SPEED</b>	50 mm/s
<b>INFILL</b>	100% - rectilinear
<b>INFILL ANGLE</b>	45°/-45°
<b>EXTRUSION TEMPERATURE</b>	200°C
<b>BED TEMPERATURE</b>	60°C

## RESULTS



## PRINTED SPECIMENS PROPERTIES

	PROPERTIES	TEST METHODS	UNITS	VALUES
<b>TENSILE</b>	Tensile modulus	ISO 527-2/5A/50	MPa	2,963
	Strength	ISO 527-2/5A/50	MPa	57.9
	Strain at Strength	ISO 527-2/5A/50	%	2.2
	Stress at break	ISO 527-2/5A/50	MPa	47.3
	Strain at break	ISO 527-2/5A/50	%	4.0
<b>BENDING</b>	Flexural modulus	ISO 178	MPa	2,675
	Flexural stress at conventionnal deflection (3,5% strain)	ISO 178	MPa	88.8
	Flexural strength	ISO 178	MPa	91.6
	Flexural strain at flexural strength	ISO 178	%	4.3
<b>CHARPY IMPACT</b>	Charpy impact resistance	ISO 179-1/1eA	kJ/m <sup>2</sup>	3.22
<b>HARDNESS</b>	Shore Hardness	ISO 868	Shore D	79.1

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

## 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>