



## Kimya PETG-R 3D Filament

**Kimya PETG-R** ("-R for recycled") 3D filament is formulated using materials from the industrial waste of a luxury and medical packaging products company. It is recycled and has comparable technical properties to our PETG-S ("-S for standard") filament.

The Kimya PETG-R recycled 3D filament has the following properties:

- Contains at least **95% post-industrial recycled materials** for the non-translucent colored version (100% for the translucent natural version)\*
- Mechanical properties similar to PETG-S
- Odorless
- Easy to print
- 100% **French** recycled material

\*Note: slight variations in color may occur between production batches due to the use of recycled material. This does not affect the technical properties of the product which are systematically checked by our quality team!

2-years KIMYA warranty.

## FILAMENT PROPERTIES

PROPERTIES	TEST METHODS	VALUES
<b>Diameter</b>	INS-6712	1.75 ± 0.1 mm 2.85 ± 0.1 mm
<b>Density</b>	ISO 1183-1	1.27 g/cm <sup>3</sup>
<b>Melt flow index (MFI)</b>	ISO 1133-1 (@225°C – 2.16 kg)	9.2 g/10min
<b>Glass transition temperature (T<sub>g</sub>)</b>	ISO 11357-1 DSC (10°C/min - 20-300°C)	80 °C

## PRINT PARAMETERS AND SPECIMENS DIMENSIONS

PRINTING DIRECTION	XY
<b>Printing Speed</b>	30 mm/s
<b>Infill</b>	100% - rectilinear
<b>Infill Angle</b>	0°/0°
<b>Nozzle Temperature</b>	245°C
<b>Bed T°</b>	80°C

## PRINTED SPECIMENS PROPERTIES

	PROPERTIES	TEST METHODS	VALUES
<b>MECHANICAL PROPERTIES</b>	Tensile modulus	ISO 527-2/1A/50	1,845 MPa
	Tensile Strength	ISO 527-2/1A/50	47.1 MPa
	Tensile strain at strength	ISO 527-2/1A/50	3.8 %
	Tensile Stress at Break	ISO 527-2/1A/50	37.2 MPa
	Tensile strain at break (type A)	ISO 527-2/5A/50	3.6 %
	Flexural modulus	ISO 178	1,746 MPa
	Flexural stress at conventional deflection (3,5% strain)*	ISO 178	60.8 MPa
	Charpy impact resistance	ISO 179-1/1eA	6.1 kJ/m <sup>2</sup>
	Shore Hardness	ISO 868	75.5D

Revised on 16/05/2022.