



## Kimya PETG-S 3D Filament

The 3D filament Kimya **PETG-S** is produced via copolymerization with PET. Polyethylene terephthalate glycol (**PETG**) is a saturated polyester polymer. It offers a perfect balance between flexibility and mechanical resistance and enables items to be produced with higher translucidity. Manufacturers use PET to produce bottles, food containers, credit cards and loyalty cards. The 3D filament Kimya PETG-S has the following properties:

- Odorless
- Offers a perfect balance between flexibility and mechanical properties
- Food contact **certified** under **EU 10/2011** and **FDA 21 CFR** (natural color only)
- Complies with the **RoHS** and **REACH** standards

2-year ARMOR 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	1,274 g/cm <sup>3</sup>
<b>Moisture rate</b>	INS-6711	< 1 %
<b>Melt flow index (MFI)</b>	ISO 1133-1 (@225°C – 2.16 kg)	12,1 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>	40-70 mm/s
<b>Infill</b>	100% - rectilinear
<b>Infill Angle</b>	45°/-45°
<b>Nozzle Temperature</b>	195-230°C
<b>Bed T°</b>	35-60°C

## PRINTED SPECIMENS PROPERTIES

	PROPERTIES	TEST METHODS	VALUES
<b>MECHANICAL PROPERTIES</b>	Tensile modulus	ISO 527-2/5A/50	1 833 MPa
	Tensile Strength	ISO 527-2/5A/50	46,6 MPa
	Tensile strain at strength	ISO 527-2/5A/50	3,3 %
	Tensile Stress at Break	ISO 527-2/5A/50	11,1 MPa
	Tensile strain at break	ISO 527-2/5A/50	24,3 %
	Flexural modulus	ISO 178	1 641 MPa
	Flexural stress at conventional deflection (3,5% strain)*	ISO 178	57,5 MPa
	Charpy impact resistance	ISO 179-1/1eA	4 kJ/m <sup>2</sup>
	Shore Hardness	ISO 868	72.5D
<b>Note 1</b>	*Fin de l'essai à 5% d'allongement d'après la norme ISO 178 même si l'éprouvette ne rompt pas.		
<b>Note 2</b>	Les données doivent être considérées comme des valeurs indicatives - Les propriétés peuvent être influencées par les conditions de production.		

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