



## Kimya TPU-92A 3D Filament

The Kimya **TPU-92A** 3D filament belongs to the thermoplastic polyurethane (TPU) family. It offers good resistance to heat and to the external environment as well as a Shore hardness of 92A. It can be used to print flexible, resistant parts. The Kimya TPU-92A 3D filament is used in the food, electronics, automotive and consumer goods sectors. It offers the following properties:

- Flexibility
- Resistance to abrasion
- Food contact certification **EU 10/2011** and **FDA 21 CFR** (except black color)
- 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	1,159 g/cm <sup>3</sup>
<b>Moisture rate</b>	INS-6711	< 1 %
<b>Melt flow index (MFI)</b>	ISO 1133-1 (@210°C – 2,16 kg)	16,5 g/10min

### PRINT PARAMETERS AND SPECIMENS DIMENSIONS

PRINTING DIRECTION	XY
<b>Printing Speed</b>	20-70 mm/s
<b>Infill</b>	100% - rectilinear
<b>Infill Angle</b>	45°/-45°
<b>Nozzle Temperature</b>	210-250°C
<b>Bed T°</b>	60-90°C

## PRINTED SPECIMENS PROPERTIES

	PROPERTIES	TEST METHODS	VALUES
<b>MECHANICAL PROPERTIES</b>	Tensile modulus	ISO 37/2/500	90 MPa
	Tensile Strength	ISO 37/2/500	43,1 MPa
	Tensile strain at strength	ISO 37/2/500	350 %
	Tensile Stress at Break	ISO 37/2/500	41,7 MPa
	Tensile strain at break	ISO 37/2/500	351,6 %
	Flexural modulus	ISO 178	81 MPa
	Flexural stress at conventional deflection (3,5% strain)*	ISO 178	3 MPa
	Charpy impact resistance	ISO 179-1/1eA	No Break
	Shore Hardness	ISO 868	92A
<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.		

Created on 13/03/2018 - Revised on 29/07/2019.