



Kimya TPC-91A 3D Filament

The Kimya **TPC -91A** 3D filament belongs to the thermoplastic copolyester family: is an elastomer. **TPC** is an elastomer obtained by copolymerization of two types of monomers: an ester (a rigid segment) and an ether (a flexible segment). It offers chemical and impact resistance. It provides Shore hardness of 91 A. It can be used to produce flexible parts. The Kimya TPC-91A 3D filament can be used in industrial applications in sectors such as electronics, textiles, roofing, etc., and in decorative and leisure 3D printing applications. It offers the following properties:

- Flexibility
- Easy to print
- Elongation > 500%
- Complies with the **REACH standard**

2-year ARMOR warranty.

FILAMENT PROPERTIES

PROPERTIES	TEST METHODS	VALUES
Diameter	INS-6712	1,75 ± 0,1 mm 2,85 ± 0,1 mm
Density	ISO 1183-1	1,22 g/cm ³
Moisture rate	INS-6711	< 1 %
Melt flow index (MFI)	ISO 1133-1 (@210°C – 2,16 kg)	18 - 20 g/10min
Melting Temperature (Tm)	ISO 11357-1 DSC (10°C/min – 20-220°C)	160 °C

PRINT PARAMETERS AND SPECIMENS DIMENSIONS

PRINTING DIRECTION	XY
Printing Speed	44 mm/s
Infill	100% - rectilinear
Infill Angle	45°/-45°
Nozzle Temperature	260°C
Bed T°	60°C

PRINTED SPECIMENS PROPERTIES

	PROPERTIES	TEST METHODS	VALUES
MECHANICAL PROPERTIES	Tensile modulus	ISO 37/2/500	67 MPa
	Tensile Strength	ISO 37/2/500	17,7 MPa
	Tensile strain at strength	ISO 37/2/500	> 500 %
	Tensile Stress at Break	ISO 37/2/500	17,5 MPa
	Tensile strain at break	ISO 37/2/500	>500 %
	Flexural modulus	ISO 178	66 MPa
	Flexural stress at conventional deflection (3,5% strain)*	ISO 178	2,6 MPa
	Charpy impact resistance	ISO 179-1/1eA	No Break
	Shore Hardness	ISO 868	91A
Note 1	Fin de l'essai à 5% d'allongement d'après la norme ISO 178 même si l'éprouvette ne rompt pas.		
Note 2	Les données doivent être considérées comme des valeurs indicatives - Les propriétés peuvent être influencées par les conditions de production.		

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