

## BASIC INFORMATION

**PRODUCT NAME:** FILAMENT 3D PC + PTFE 1.75mm

**PRODUCT DESCRIPTION:** PC+PTFE filament - polycarbonate with addition of teflon in the form of a thread, designed for 3D printing using the FFF/FDM method. Filament coiled on spools, vacuum-packed with desiccant in a PA/PE bag, and then in a box. The product is designed for use with 3D printers using FDM technology. It should be used in a well ventilated room to avoid exposure to fume emissions during printing. It is important to avoid direct contact with hot printer components, which can lead to burns. Filament should be stored in a dry place, in a closed container and away from children. It is recommended to use the filament within the recommended printing temperature range for optimum results. Dispose of waste filament in accordance with local regulations. The product has been designed with safety in mind and meets all relevant standards for consumer use.

**STORAGE:** Store in dry area. Store in a closed container.

## PRODUCT PARAMETERS

PARAMETER	VALUE
Filament diameter [mm]	1.75
Diameter tolerance [mm]	+/-0,05
Oval tolerance [mm]	+/-0,02

## RECOMMENDED PRINTING PARAMETERS

PARAMETER	VALUE
3D printing temperature [C]	270-300
Heated bed [C]	90-120
Cooling fan [%]	0-50
Closed chamber	required
Closed chamber temperature [C]	50-80
Drying conditions [C/h]	110/6, zalecane suszenie przed kazdym wydrukiem

## PHYSICAL PARAMETERS OF THE MATERIAL

PARAMETER	VALUE	UNIT	TEST METHOD
<b>Density</b>	1.32	g/cm <sup>3</sup>	ISO 1183
<b>VICAT</b>	145	stC	ISO 306 (50 N, 50stC/h)
<b>Tensile modulus</b>	2200	MPa	ISO 527 (23stC, 1 mm/min)
<b>Tensile strength at break</b>	55	MPa	ISO 527 (23stC, 5 mm/min)
<b>Charpy impact strength</b>	50	kJ/m <sup>2</sup>	ISO 179/1 eU (23stC)
<b>Charpy impact strength (notched)</b>	12	kJ/m <sup>2</sup>	ISO 179/1 eU (23stC)
<b>HDT</b>	130	stC	ISO 75 (1,8 MPa)
<b>HDT</b>	140	stC	ISO 75 (0,45 MPa)
<b>Flame rating</b>	HB	-	UL94 (1,5 mm)
<b>Flame rating</b>	V1	-	UL94 (3,0 mm)
<b>Linear longitudinal shrinkage</b>	0,55-0,75	%	ISO 294-4
<b>Linear transversal shrinkage</b>	0,60-0,75	%	ISO 294-4
<b>Wear factor</b>	4*10 <sup>-7</sup>	mm <sup>3</sup> /(Nm)	ASTM D3702
<b>Static coefficient of friction</b>	0.18	-	ASTM D1894
<b>Dynamic coefficient of friction</b>	0.14	-	ASTM D1894
<b>Specific surface resistivity</b>	1*10 <sup>12</sup>	Omega	ATM D257

The values above have been measured using standard test specimens made of non-colored material at room temperature. The figures should be considered as indicative values only. Actual properties of PC + PTFE parts can be affected by the printing parameters, design of the model, ambient conditions, application of the printout etc. It is essential that users test our products to determine whether they are suitable for their intended use. ROSA PLAST Sp. z o.o. accepts no liability for any health detriment or material losses or any other losses related to the use of the material. Additional documents, certificates and detailed technical information can be provided on special request.

