

## BASIC INFORMATION

**PRODUCT NAME:** FILAMENT 3D PC-PBT(HT-UV-IMPACT) 1.75mm

**PRODUCT DESCRIPTION:** Filament PC-PBT filament - a mixture of polycarbonate and poly(butylene tetrathalate) in the form of a filament, designed for FFF/FDM 3D printing. The supplied filament is wound on a spool, vacuum sealed in a PA/PE bag with moisture absorber and packed in a cardboard 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]	240-260
Heated bed [C]	90-110
Cooling fan [%]	0-20
Closed chamber	recommended
Closed chamber temperature [C]	50-80
Drying conditions [C/h]	80/6

## PHYSICAL PARAMETERS OF THE MATERIAL

PARAMETER	VALUE	UNIT	TEST METHOD
Density	1.2	g/cm <sup>3</sup>	ISO 1183
VICAT B	120	stC	ISO 306
Tensile modulus	2095	MPa	ISO 527 (23stC, 1 mm/min)
Tensile strength at yield	54	MPa	ISO 527 (23stC, 50 mm/min)
Tensile strain at yield	5	%	ISO 527 (23stC, 50 mm/min)
Charpy impact strength	54	KJ/m <sup>2</sup>	ISO 179/1 (23stC)
Charpy impact strength (notched)	20	KJ/m <sup>2</sup>	ISO 179/1 (-30stC)
Melting temperature	225	stC	ISO 3146
Temperature of deflection under load	110	stC	ISO 75-2/A (0,45 MPa)
Temperature of deflection under load	90	stC	ISO 75-2/A (1,80 MPa)
Coefficient of linear thermal expansion	0.8	E-4/K	ISO 11359-2
Flammability	HB	-	UL94 (0,8 mm)
Flammability	HB	-	UL94 (1,6 mm)
UV resistance	TAK	-	-
Water absorption	0.4	%	ISO 62 (23stC)
Moisture absorption	0.1	%	ISO 62 (23stC, 50% wilg. wzg.)
Relative permittivity	3.1000000000000009	-	IEC-62631-2-1 (1MHz)

<b>Dissipation factor elektrycznego</b>	200	E-4	IEC-62631-2-1 (1MHz)
<b>Specific volume resistivity</b>	1.0E14	Ohm*cm	IEC-62631-3-1
<b>Specific surface resistivity</b>	1.0E15	Ohm	IEC-62631-3-2
<b>Dielectric strength</b>	18	kV/mm	IEC-60243-1

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-PBT(HT-UV-IMPACT) 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.

