

PRODUCT NAME: 3D FILAMENT PC-PBT 1,75mm

PRODUCT DESCRIPTION: PC-PBT filament – blend of polycarbonate and polybutylene terephthalate 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.

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

Net weight [g]	500	1000
Weight with packaging [g]	900	1400
Spool weight [g]	Transparent PC: 245	Transparent PC: 260
	ECO PP wood: 190	ECO PP wood: 205
Spool dimensions [mm] (∅ / height / hole ∅)	Transp. PC: 200/55/52	Transp. PC: 200/68/52
	ECO PP wood: 200/57/52	ECO PP wood: 200/70/52
Box dimensions [mm]	220/210/65	220/210/75

RECOMMENDED PRINTING PARAMETERS

Parameter	Value
Print temperature [°C]	240-260
Bed temperature [°C]	90-110
Cooling [%]	0-20
Closed chamber	Recommended
Chamber temperature [°C]	50-80
We recommend that drying the filament before printing at 80°C for at least 6h.	

PHYSICAL PARAMETERS OF THE MATERIAL

Parameter	Value	Unit	Test method
Density	1,2	g/cm ³	ISO 1183
VICAT B	120	°C	ISO 306
Tensile modulus	2095	MPa	ISO 527 (23°C, 1 mm/min)
Tensile strength at yield	54	MPa	ISO 527 (23°C, 50 mm/min)
Tensile strain at yield	5	%	ISO 527 (23°C, 50 mm/min)
Charpy impact strength	54	KJ/m ²	ISO 179/1 (23°C)
Charpy impact strength (notched)	20	KJ/m ²	ISO 179/1 (-30°C)
Melting temperature	225	°C	ISO 3146
Temperature of deflection under load	110	°C	ISO 75-2/A (0,45 MPa)
Temperature of deflection under load	90	°C	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	YES	-	-
Water absorption	0,4	%	ISO 62 (23°C)
Moisture absorption	0,1	%	ISO 62 (23°C, 50% r. h.)
Relative permittivity	3,1	-	IEC-62631-2-1 (1MHz)
Dissipation factor	200	E-4	IEC-62631-2-1 (1MHz)
Specific volume resistivity	1.0E14	Ohm*cm	IEC-62631-3-1
Specific surface resistivity	1.0E15	Ohm	IEC-62631-3-2
Dielectric strength	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 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.

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