

BASIC INFORMATION

PRODUCT NAME: FILAMENT 3D PA12 + 15CF 1.75mm

PA12+15CF filament - thermoplastic polymer with carbon fiber 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 wellventilated room to avoid exposure to fume emissions during printing. It is

PRODUCT DESCRIPTION: 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 felt material 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]	250-300
Heated bed [C]	70-120
Cooling fan [%]	50-100
3D printing temperature (High Speed printing) [C]	250-300
Heated bed (High Speed printing) [C]	70-120
Cooling fan (High Speed printing) [%]	50-100
Closed chamber	required
Closed chamber temperature [C]	50-80
Recommended nozzle	steel
Recommended nozzle size [mm]	>0,5
Drying conditions [C/h]	80/4

PHYSICAL PARAMETERS OF THE MATERIAL

PARAMETER	VALUE	UNIT	TEST METHOD
Density	1,06	g/cm ³	ISO 1183 (23°C)
Tensile modulus	7995	MPa	ISO 527-1/2 (23°C, 1 mm/min)
Tensile strength at break	123	MPa	ISO 527-1/2 (23°C, 5 mm/min)
Elongation at break	5	%	ISO 527-1/2 (23°C, 5 mm/min)
Charpy impact strength	73	kJ/m ²	ISO 179/1 eU (23°C)
Charpy impact strength (notched)	11	kJ/m ²	ISO 179/1 eU (23°C)
HDT	150	°C	ISO 75 (1,80 MPa)
HDT	170	°C	ISO 75 (0,45 MPa)
Melting point	179	°C	ISO 3146 (10°C /min)
Flame rating	HB	-	UL94 (1,6 mm)
Specific Surface Resistivity	<10*10 ³	Ohm	IEC-62631-3-2
Specific Volume Resistivity	<10*10 ³	Ohm*cm	IEC-62631-3-1

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 PA12 + 15CF 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.

