

## BASIC INFORMATION

**PRODUCT NAME:** FILAMENT 3D ROSA-Flex 85A 1.75mm

**PRODUCT DESCRIPTION:** ROSA-Flex 85A filament is a thermoplastic polyurethane 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 PET/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]	220-250
Heated bed [C]	30-60
Cooling fan [%]	0-60
Closed chamber	not required
Recommended nozzle	brass
Drying conditions [C/h]	80/4

## PHYSICAL PARAMETERS OF THE MATERIAL

PARAMETER	VALUE	UNIT	TEST METHOD
Density	1.18	g/cm <sup>3</sup>	ISO 1183
Tensile strength	35	MPa	EN 12803
Stress at 100% elongation	6	MPa	EN 12803
Elongation at break	520	%	EN 12803
Glass transition temperature (T <sub>g</sub> )	-40	°C	DMA
Hardness	84	Shore A	ISO 868
Tear strength	78	kN/m	ISO 34
Abrasion resistance	29	mm <sup>3</sup>	EN 12770
Compression	29	%	ISO 815 (23°C)
Compression	42	%	ISO 815 (70°C)
Hydrolysis resistance, expressed as variation of elongation at break after 30 days at 80°C	4	%	EN 12803
Hydrolysis resistance, expressed as variation of tensile strength after 30 days at 80°C	-9	%	EN 12803
Hydrolysis resistance, expressed as variation of tear strength after 30 days at 80°C	-8	%	ISO 34

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 ROSA-Flex 85A 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.

