# TECHNICAL DATA SHEET

FILAMENT 3D ROSA-Flex 96A

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## BASIC INFORMATION

**PRODUCT NAME:** FILAMENT 3D ROSA-Flex 96A 1.75mm

**PRODUCT DESCRIPTION:** ROSA-Flex 96A filament - 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 |

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## PHYSICAL PARAMETERS OF THE MATERIAL

| PARAMETER | VALUE | UNIT | TEST METHOD |
|---|---|---|---|
| **Density** | 1.22 | g/cm3 | ISO 1183 |
| **VICAT** | 126 | °C | ISO 306 (1 kg, 50°C/h) |
| **Tensile strength** | 55 | MPa | EN 12803 |
| **Tear strength** | 140 | kN/m | ISO 34 |
| **Elongation at break** | 350 | % | EN 12803 |
| **Abrasion resistance** | 35 | mm3 | EN 12770 |
| **Glass transition temperaturę (Tg) DSC** | -25 | °C | - |
| **Glass transition temperaturę (Tg) DMA** | -201 | °C | - |
| **Elastic modulus at 5% of elongation** | 7 | MPa | EN 12803 |
| **Elastic modulus at 50% of elongation** | 12.9 | MPa | EN 12803 |
| **Elastic modulus at 100% of elongation** | 15.5 | MPa | EN 12803 |
| **Elastic modulus at 300% of elongation** | 44.5 | MPa | EN 12803 |
| **Food Contact Approval** | YES | - | FCA declaration in separate document |

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 96A 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.