

## BASIC INFORMATION

**PRODUCT NAME:** FILAMENT 3D PET-G Standard HS 1.75mm

PET-G Standard filament - poly(ethylene terephthalate) with addition of glycol in the form of a thread, designed for 3D printing using the FFF/FDM method. Filament coiled on spools or cardboard core (no spool), 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 well ventilated room to avoid exposure to fume

**PRODUCT DESCRIPTION:** 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]                                    | 60-80        |
| Cooling fan [%]                                   | 0-60         |
| 3D printing temperature (High Speed printing) [C] | 240-270      |
| Closed chamber                                    | not required |
| Drying conditions [C/h]                           | 60/4         |

## PHYSICAL PARAMETERS OF THE MATERIAL

| PARAMETER  | VALUE                 | UNIT              | TEST METHOD     |
|--|-----------------------|-------------------|-----------------|
| Gęstość /Density   | 1.29                  | g/cm <sup>3</sup> | -               |
| Moduł sprężystości/Tensile modulus   | 2980                  | MPa               | ISO 527         |
| Napężenie rozciągające do granicy plastyczności/Tensile Stress at yield            | 51                    | MPa               | ISO 527         |
| Wytrzymałość na rozciąganie przy zrywaniu/Tensile strength at break                | 51                    | MPa               | ISO 527         |
| Odkształcenie rozciągające do granicy plastyczności/Tensile Strain at yield        | 4                     | %                 | ISO 527         |
| Odkształcenie rozciągające do zerwania/ Tensile Strain at break                    | 4                     | %                 | ISO 527         |
| Nominalne odkształcenie rozciągające przy zerwaniu/Nominal Tensile Strain at Break | 29                    | %                 | ISO 527         |
| Moduł ugięcia/Flexural modulus   | 2040                  | MPa               | ISO 178         |
| Napężenie zginające/Flexural stress  | 68                    | MPa               | ISO 178         |
| Udarność wg metody Izoda (karb)/Izod impact strength (notched)                     | 4                     | kJ/m <sup>2</sup> | ISO 180, -30°C  |
| Udarność wg metody Izoda (karb)/Izod impact strength (notched)                     | 4                     | kJ/m <sup>2</sup> | ISO 180/A, 0°C  |
| Udarność wg metody Izoda (karb)/Izod impact strength (notched)                     | 4.7                   | kJ/m <sup>2</sup> | ISO 180/A, 23°C |
| Udarność wg metody Izoda (bez karbu)/Izod impact strength (unnotched)              | 120                   | kJ/m <sup>2</sup> | ISO 180, -30°C  |
| Udarność wg metody Izoda (bez karbu)/Izod impact strength (unnotched)              | bez złamania/no break | kJ/m <sup>2</sup> | ISO 180, 0°C    |
| Udarność wg metody Izoda (bez karbu)/Izod impact strength (unnotched)              | bez złamania/no break | kJ/m <sup>2</sup> | ISO 180, 23°C   |
| Temperatura zeszklenia/Glass Transition Temperature T <sub>g</sub>                 | 80                    | C                 | ASTM D3418      |
| VICAT  | 78                    | C                 | ISO 306         |

|  |         |   |  |
|--|---------|---|--|
| <b>HDT B</b>   | 68      | C | ISO 75, 0,45MPa  |
| <b>HDT A</b>   | 62      | C | ISO 75, 1,8 MPa  |
| <b>Klasa palności/Flame rating</b>                                 | V2      | - | UL94 (4,0 mm)  |
| <b>Dopuszczenie do kontaktu z żywnością /Food Contact Approval</b> | TAK/YES | - | Deklaracja FCA w oddzielnym dokumencie /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 PET-G Standard HS 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.

