Chemical Specifications

PETG Pro Filaments

PETG Pro is an FFF 3D printing filaments produced from a highly fluid PETG modified material. Like PETG, PETG Pro has good dimensional stability, low warpage and no cracking. Through the adjustment of formula and production process, PETG Pro has a lower printing temperature (220℃), which is suitable for most FFF3D printers.

Main Features：

Easy to print / dimensionally stable

The Main Parameters:

|  |  |  |  |
| --- | --- | --- | --- |
| Physical Properties | Testing method | Unit | Typical value |
| Density | ISO 1183 | g/cm3 | 1.27~1.28 |
| Melt index MFR(220℃/2.16Kg) | ISO 1133 | g/10min | 8~12 |
| Water absorption(23℃/24h) | ISO 62 | % | ＜0.2 |
| Mechanical behavior | | | |
| Tensile strength（X-Y） | ISO 527 | Mpa | 41~45 |
| Elongation at break（X-Y） | ISO 527 | % | 10~12 |
| Elastic modulus（X-Y） | ISO 527 | Mpa | 1400~1500 |
| Bending strength（X-Y） | ISO178 | Mpa | 64~66 |
| Notched impact strength（X-Y） | ISO180 | KJ/m2 | 5~6 |
| Thermodynamic properties | | | |
| HDT@ 0.455 MPa(66 psi) | ISO75 | ℃ | 68 |
| Continuous use temperature | IEC 60216 | ℃ | 65 |

Test Spline Printing Conditions：

|  |  |
| --- | --- |
| Test equipment | Guider IIS （Flashforge technololgy） |
| Nozzle diameter | 0.4mm |
| Nozzle temperature | 220 °C |
| Printing speed | 50mm/s |
| Wall thickness | 1.2mm |
| Filling | 100% |
| Standard spline | The specific dimensions are as in appendix 1 |

Recommended printing parameters:

|  |  |
| --- | --- |
| Parameter |  |
| Nozzle temperature | 210~230℃(Recommended 220℃) |
| Print platform temperature | Room temperature~70℃(Recommended 50℃) |
| Printing platform materials | Tempered glass,BuildTak,carbon fiber board |
| Nozzle diameter | φ0.4 |
| Model cooling fan | 0~50% |
| Layer thickness | 0.12~0.3mm |
| Printing speed | 40~60mm/s(推荐50mm/s) |
| Idle speed | 60~120mm/s |
| Printing ambient temperature | Room temperature ~50℃ |
| Withdrawal strength | 1~2mm |
| Withdrawal speed | 30~50mm/s |
| Support material | Self supporting |

Precautions：

To prevent moisture absorption and contamination, the packaging of filaments should be kept airtight and undamaged until they are opened for use. For the same reason, some used filaments should be resealed before storage.

PETG Pro filament tends to absorb moisture, and it is recommended to dry it before use. Dry the filament in a hot air oven at 70°C for at least 5 hours to ensure the success rate and quality of the printed model.

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Annex 1: Test spline size and printing orientation

