



| SUGGESTED PRINT SETS (1) | | | |
|--------------------------------|---------------------|--------------------|---------------|
| Suggested print sets | unit | value | test method |
| extruder temp | °C | 255-270 | internal |
| plate temp | °C | 50 | internal |
| min. nozzle diameter (2) | mm. | 0.5 | internal |
| fan | % | 0 | internal |
| print speed | mm/l° | 35-45 | internal |
| PROPERTY | | | |
| Physical | | | |
| Specific gravity | g/cm ³ | 1 | ISO 1183 |
| Water absorption | % | <0,3 | 23°C / 24 h |
| Linear mould shrinkage | % | 0,2-0,6 | DIN 16901 |
| Mechanical at 23°C / 50% rh | | | |
| Tensile strength | MPa | 54 | ISO 527 |
| Elongation at maximum force | % | 1,2 | ISO 527 |
| Modulus of elasticity | GPa | 7 | ISO 527 |
| Flexural strength | MPa | 78 | ISO 178 |
| Flexural elongation | % | 1,5 | ISO 178 |
| Flexural modulus | GPa | 6 | ISO 178 |
| Charpy impact strength | kJ / m ² | 35 | ISO 179 1eU |
| Thermal | | | |
| Vicat softening temp. | °C | 80 | DIN ISO 306 |
| Continuous service temp. | °C | 100 | UL746B |
| Maximum (short term) use temp. | °C | 130 | - |
| Electrical | | | |
| Insulation resistance | Ω | ≤10 ³⁻⁷ | DIN/IEC 60167 |
| Surface resistance | Ω | <10 ⁷ | DIN IEC 60093 |

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ADDITIONAL INFORMATIONS

In general filaments made with PLENE Carbon can be processed on conventional 3D printer using FDM / FFF technology.

PLENE Carbon is a special polypropilene carbon fiber reinforced developed for 3D printing and to obtain best results we recommend pre drying the filaments at 80° for 2 h. Increase drying time for spools up to 1 kg.

Don't leave the filament stopped inside the nozzle more than 20 min. If that down the temperature under 210°, better stop the thermal control.

(1) Suggested print set merely represent a recommendation for general use . Every printer necessity a specific set , nozzle temp, bed temp, etc .

(2) 0.5 mm is the minimum diameter of the nozzle with carbon fibers reinforced. Carbon fibers are abrasive, we suggest to use a nozzle in hardened or tempered metal, like Widia, or wear resistance internal surface, like ceramics or other.
NO tefloned surface!

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