

Technical Data Sheet



Product name: CarbonFil™

Version: v3

Our CarbonFil filament is based upon the unique PETG blend of our HDglass compound and is reinforced with 20% ultra-light and relatively long stringer carbon fibres, which has resulted in an exceptionally stiff carbon-fibre reinforced 3D printer filament. CarbonFil is twice as stiff as HDglass and yet it is even 10% more impact resistant, which is a remarkable feature for carbon-fibre reinforced filament.

| Properties | Typical value | Test Method | Test condition |
|------------------------|-----------------------|-------------|-------------------------------|
| Physical | | | |
| Specific gravity | 1.19 g/cc | ASTM D792 | - |
| Melt flow rate | - | - | - |
| Water absorption | - | - | - |
| Moisture absorption | ± 0.13% | - | - |
| Mechanical | | | |
| Impact strength | 7.9 KJ/m ² | ASTM D256 | Izod Notched @23° C (73° F) |
| Tensile strength | 52.5 Mpa | ISO 527 | @Yield 50mm/min (2 inch/min) |
| Tensile modulus | 3800 Mpa | ISO 527 | 1mm/min |
| Elongation at break | 8% | ISO 527 | @ Break 50mm/min (2 inch/min) |
| Flexural strength | - | - | - |
| Flexural modulus | ± 4600 Mpa | - | - |
| Hardness | 109 | ASTM D785 | Rockwell R-scale |
| Thermal | | | |
| Print temperature | ± 230 - 265° C | - | - |
| Melting temperature | - | - | - |
| Viscat softening temp. | ± 85° C | ASTM D648 | @ 0.455 Mpa (66psi) |
| Optical | | | |
| Haze | - | - | - |
| Transmittance | - | - | - |
| Gloss | - | - | - |

| Product details, certifications and compliance | | Diameter | Tolerance | Roundness |
|--|----------|----------|-----------|-----------|
| HS Code | 39169090 | 1.75mm | ± 0.05mm | ≥ 95% |
| REACH compliant | Yes | 2.85mm | ± 0.10mm | ≥ 95% |
| RoHS certified | Yes | | | |

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