# PAHT Carbon F. TDS

**High-Temperature Polyamide with Carbon Fiber for FDM 3D Printers**

## Product Description

AzureFilm PAHT Carbon Fiber is a high temperature polyamide based material. This 3D Filament is high performance material for industrial 3D printing. Is temperature resistant up to 160°C and can be used for printing durable end user parts.

## Properties

| Physical properties | Test method | Value |
|---|---|---|
| Material | **PAHT Carbon Fiber** | Color Black |
| Specific gravity | ISO 1183-3 | 1,24 g/cm3 |
| Water absorption | 23°C / 24h ISO 62 | < 0,3 % |
| **Mechanical properties at 23°C / 50% rh** | | |
| Tensile strength | ISO 527 | 130 MPa |
| Elongation at maximum force | ISO 527 | 2 % |
| Modulus of elasticity | ISO 527 | 11,5 GPa |
| Charpy impact strength | ISO 179 | 35 kJ/m2 |
| **Thermal properties** | | |
| Heat distortion temperature | ISO 75 | 90 °C |
| Continuous service temp. | 20.000 h IEC 60216 | 120 °C |
| Service temperature | During lifetime max. 200h ISO 3167 A | 160 °C |
| **Electrical properties** | | |
| Insulation resistance strip electrode | DIN IEC 60167 | ≤10² Ω |
| Surface resistance | DIN IEC 60093 | <10² Ω |

## Printing Recommendations

Nozzle temperature: 270 – 290°C
Heated bed: recommended 90-120 °C
Print speed: 40 – 60 mm/s
Layer height: 0,2 mm
Nozzle diameter: 0,6 mm
Build platform: Blue tape, Kapton tape, glass bed + Dimafix spray

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