Spectrum FILAMENTS

TECHNICAL DATA SHEET

PET CF15

MATERIAL PROPERTIES

Specific gravity	1.40 g/cm³	ISO 1183
Water absorption, 23°C/24h	< 0.3%	ISO 62
Mechanical Properties at 23°C / 50% rh		
Tensile strength (dry, at 50 mm/min)	80 MPa	ISO 527
Elongation at max. force (dry, at 50 mm/min)	2,50%	ISO 527
Modulus of elasticity (dry, at 1 mm/min)	9 GPa	ISO 527
Flexural strength (dry, at 10 mm/min)	130 MPa	ISO 178
Flexural elongation at max. force	3,50%	ISO 178
Flexural modulus (dry, at 2 mm/min)	8 GPa	ISO 178
Charpy impact strength, dry	40 kJ/m²	ISO 179 1eU
Thermal Properties		
Service temperature (max. 200h)	125°C	

GUIDELINE FOR PRINT SETTINGS*

Nozzle temperature	245-270°C
Bed temperature	50-70°C
Active cooling fan	0 - 30%
Layer height**	≥ 0.20mm
Shell thickness**	0.50 – 3.00 mm
Print speed**	30-80 mm/s
Closed chamber	not necessary
Dry box	recommended
Ruby or hardened nozzle	recommended
Recommended nozzle	≥ 0.5 mm

* settings are based on a 0,5 mm nozzle.
** depending on the geometrical complexity

DESCRIPTION

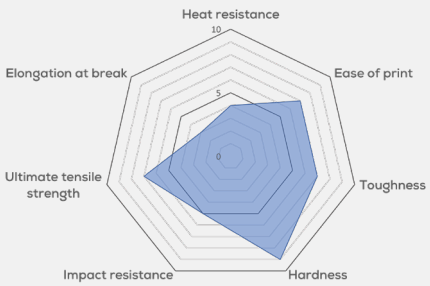
Spectrum PET CF15 is a black through-dyed material based on polyethylene terephthalate (PET). It is the easiest-to-print material filled with carbon fiber on the market and shows much better temperature and mechanical properties than PET-G based materials. It presents no retraction issues and does not require a heating chamber. It demonstrates a perfect surface finish directly from the printer, thus reducing the need for further treatments.

FEAUTURES

- a relatively high resistance to thermal ageing
- high Z-strength
- high hardness, stiffness and creep resistance of printed elements
- chemical resistance to lubricants and oils
- good tribological properties, including dry friction conditions such as in slide bearings
- very robust interlayer lamination
- excellent impact strength

STORAGE AND SHELF LIFE

Filament should be stored in a dry room at room temperature. Recommended storage temperature is ca. 18-25°C (64.4 -77.0°F). Keep out of moisture, sunlight and direct heat. When stored properly, product has a shelf life of 24 months.



SUPPORT

If you have any questions or experience any issues, please do not hesitate to contact us at **support@spectrumfilaments.com**