Spectrum FILAMENTS

TECHNICAL DATA SHEET

PET-G Carbon

MATERIAL PROPERTIES

Specific Gravity	1.32 g/cm³	ISO 1183
Mechanical Properties		
Charpy impact strength (sample 80x10x4 mm)		
Unnotched, 3D printing	17 kJ/m²	ISO 179-1eU
Notched, 3D printing	5.4 kJ/m²	ISO 179-1eU
Tensile elongation at break (3D printing)*	4,90%	ISO 527-1
Tensile strength at break (3D printing)*	45 MPa	ISO 527-1
Elastic modulus 3D printing	4250 MPa	ISO 527-1
Thermal Properties		
VICAT, 50 N (heating rate 50°C/h)	80°C	ISO 306

*speed 5mm/min

GUIDELINE FOR PRINT SETTINGS*

Nozzle temperature	230-255°C
Bed temperature	60-80°C
Active cooling fan	YES (up to 100%)
Layer height**	0.05 - 0.30 mm
Shell thickness**	0.40 – 2.70 mm
Print speed**	30-70 mm/s
Closed chamber	not necessary
Dry box	not necessary
Ruby or hardened nozzle	recommended

* settings are based on a 0,4 mm nozzle.
** depending on the geometrical complexity

Disclaimer
The product- and technical data provided in this datasheet is correct to the best of Spectrum Group Sp. z o.o. knowledge and are intended for reference and comparison purposes only. They should not be used for design specifications or quality control purposes. Actual values may vary according to printing conditions, model complexity, environmental conditions, etc. The user assumes all responsibility for the use of all information provided and shall verify quality and other properties or any consequence from the use of all such information. Typical values are indicative only and are not to be construed as being binding specifications. Spectrum Group Sp. z o.o. shall not be made liable for any damage, injury or loss induced from the use of Spectum Group Sp. z o.o. materials in any particular application.

DESCRIPTION

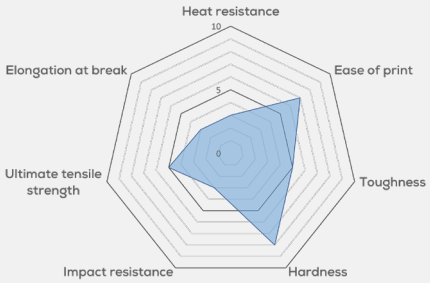
Spectrum PET-G Carbon is a modified, PET-G-based filament blended with carbon fibres which contributes to a considerably higher rigidity, hardness and tensile resistance, while retaining low shrinkage and very good adhesion to build platforms typical for the pure PET-G. The 10% addition of carbon fibres enables to obtain matte surfaces of printed items, which greatly improves the aesthetic properties of printed items.

FEAUTURES

- improved hardness and rigidity as compared to the pure PET-G
- higher plasticisation temperature as compared to the pure PET-G
- improved abrasion resistance
- much higher compression resistance as compared to the pure PET-G
- good mechanical properties
- high aesthetic, matte surface quality
- no shrinkage after cooling

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**