

PET-G Carbon

MATERIAL PROPERTIES

Specific Gravity	1.32 g/cm ³	ISO 1183
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Mechanical Properties

Charpy impact strength (sample 80x10x4 mm)

Unnotched, 3D printing	17 kJ/m ²	ISO 179-1eU
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Notched, 3D printing	5.4 kJ/m ²	ISO 179-1eU
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Tensile elongation at break (3D printing)*	4,90%	ISO 527-1
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Tensile strength at break (3D printing)*	45 MPa	
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Elastic modulus		ISO 527-1
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Tensile (speed 1mm/min), 3D printing	4250 MPa	ISO 527-1
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Thermal Properties

VICAT, 50 N (heating rate 50°C/h)	80°C	ISO 306
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*speed 5mm/min

GUIDELINE FOR PRINT SETTINGS*

Nozzle temperature	230-255°C
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Bed temperature	60-80°C
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Active cooling fan	YES (up to 100%)
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Layer height**	0.05 - 0.30 mm
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Shell thickness**	0.40 - 2.70 mm
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Print speed**	30-70 mm/s
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Closed chamber	not necessary
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Dry box	not necessary
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Ruby or hardened nozzle	recommended
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* settings are based on a 0,4 mm nozzle.

** depending on the geometrical complexity

DESCRIPTION

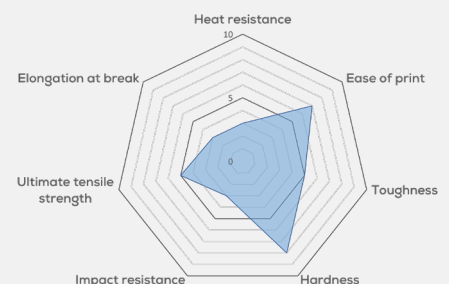
Spectrum PET-G Carbon is a modified, PET-G-based filament blended with carbon fibres which contributes to a considerably higher rigidity, hardness and tensile resistance, while retaining low shrinkage and very good adhesion to build platforms typical for the pure PET-G. The 10% addition of carbon fibres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