Spectrum FILAMENTS

TECHNICAL DATA SHEET

PLA Carbon

MATERIAL PROPERTIES

Density	1.30 g/cm^3	ISO 1183
Mechanical Properties		
Charpy impact strength (sample 80x10x4 mm)		
Unnotched, at +23°C	55 kJ/m²	ISO 179-1eU
Notched, at +23°C	8 kJ/m²	ISO 179-1eA
Tensile elongation at break (3D printing) *	0.5%	ISO 527 (1)
Tensile strength at break (3D printing) *	65 MPa	ISO 527 (1)
Elastic modulus	12500 MPa	ISO 527 (1)
Electrical properties		
Electrical resistivity	6E1 ohm	D 257
Thermal properties		
VICAT softening point	60°C	N/A

*speed 5mm/min

GUIDELINE FOR PRINT SETTINGS*

Nozzle temperature	190-220°C
Bed temperature	0-45°C
Active cooling fan	YES (up to 100%)
Layer height**	0.05 - 0.30 mm
Shell thickness**	0.40 - 2.70 mm
Print speed**	40-70 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

DESCRIPTION

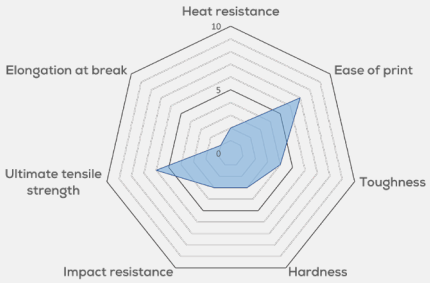
Spectrum Carbon PLA is a modified, PLA-based filament blended with carbon fibers which contributes to a considerably higher rigidity, hardness and tensile resistance, while retaining low shrinkage and very good adhesion to build platforms typical for the pure PLA. The 10% addition of carbon fibre enables 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 PLA
- improved abrasion resistance
- much higher compression resistance
- good mechanical properties
- high aesthetic, matte surface quality

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**