Spectrum FILAMENTS

TECHNICAL DATA SHEET

PA6 Low Warp CF15S

MATERIAL PROPERTIES

Density	1,18 g/cm³	EN ISO 1183
Moisture Absortpion (23 ºC / 50% r.h.)	2,50%	ISO 62
Water Absorption (23 ºC / saturation in water)	8%	ISO 62
Mechanical properties*		
Tensile strength (23 ºC, 50 mm/min)	120 MPa	EN ISO 527-1
Tensile modulus (23 ºC, 50 mm/min)	9000 MPa	EN ISO 527-1
Elongation at break (23 ºC, 50 mm/min)	4,00%	EN ISO 527-1
Flexural Modulus (23 ºC, 2 mm/min)	8000 MPa	EN ISO 178
Flexural Strength (23 ºC, 2 mm/min)	180 MPa	EN ISO 178
Charpy impact strength		
Unnotched @ 23°C	60 kJ/m²	ISO 179/1eU
Notched @ 23°C	4 kJ/m²	ISO 179/1eU
Thermal properties		
Heat Deflection Temperature		
1.8 MPa	65°C	ISO 75 -1/-2
0.45 MPa	180°C	ISO 75 -1/-2

*dry

GUIDELINE FOR PRINT SETTINGS*

Nozzle temperature	250-280°C
Bed temperature	< 80°C
Active cooling fan	0 - 30%
Layer height**	≥ 0.15mm
Shell thickness**	0.50 - 3.00 mm
Print speed**	30-60 mm/s
Closed chamber	recommended
Dry box	recommended
Ruby or hardened nozzle	recommended
Recommended nozzle	≥ 0.5 mm
Drying (if wet)	recommended***

* settings are based on a 0,5 mm nozzle.
** depending on the geometrical complexity
*** at least 12h at 80 using a hot dry air oven

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

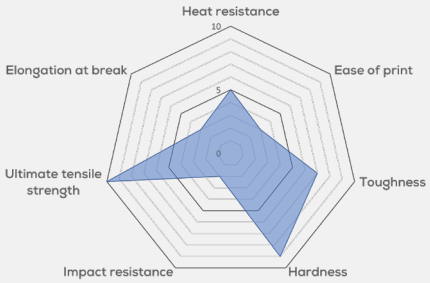
Spectrum PA6 Low Warp CF15S is a heat-stabilized, carbon fibre reinforced composite filament. The fibre content reduces the shrinkage, which is common or most high-temperature materials, making the printing process much easier and giving prints an aesthetically pleasing "carbon-like" look. Spectrum PA6 Low Warp CF15S is the best choice for printing functional models that require high rigidity and continuous high-temperature and chemical resistance.

FEAUTURES

- 15% carbon fibres
- 2x increase in rigidness compared to non-modified polyamid
- high mechanical properties and abrasion resistance
- excellent chemical resistance
- printable on desktop devices without a heated chamber
- matt, carbonised print surface
- perfect bonding of the layers

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**