

PC CF

MATERIAL PROPERTIES

Specific Gravity	1.22 g/cm ³	D 792
------------------	------------------------	-------

Mechanical Properties

Tensile Strength at Yield*	76 MPa	ISO 527
----------------------------	--------	---------

Tensile Elongation at Break*	>100 %	D 638
------------------------------	--------	-------

Flexural Strength**	920 kg/cm ²	D 790
---------------------	------------------------	-------

Flexural Modulus**	24.000 kg/cm ²	D 790
--------------------	---------------------------	-------

Izod Impact Strength, Notched		
-------------------------------	--	--

@ 23°C	70 kg•cm/cm	D 256
--------	-------------	-------

Thermal Properties

Heat Deflection Temperature		
-----------------------------	--	--

0.45mn/m2	140°C	D 648
-----------	-------	-------

1.81mn/m2	129°C	D 648
-----------	-------	-------

Vicat Softening Temperature	150°C	D 1525
-----------------------------	-------	--------

*50mm/min

**15mm/min

GUIDELINE FOR PRINT SETTINGS*

Nozzle temperature - standard speed	270-290°C
-------------------------------------	-----------

Bed temperature	>80°C
-----------------	-------

Active cooling fan	0-20%
--------------------	-------

Layer height**	≥ 0.2 mm
----------------	----------

Shell thickness**	0.5 - 3.0 mm
-------------------	--------------

Closed chamber	recommended for larger prints
----------------	-------------------------------

Dry box	Yes
---------	-----

Ruby or hardened nozzle	Yes
-------------------------	-----

Drying (if wet)	recommended***
-----------------	----------------

Adhesive	not necessary (if increased adhesion needed or to prevent warping; Magigoo PC)
----------	---

* settings are based on a 0.4mm nozzle

** depending on the geometrical complexity

*** at least 6h at 75°C 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 Spectrum Group Sp. z o.o. materials in any particular application.

DESCRIPTION

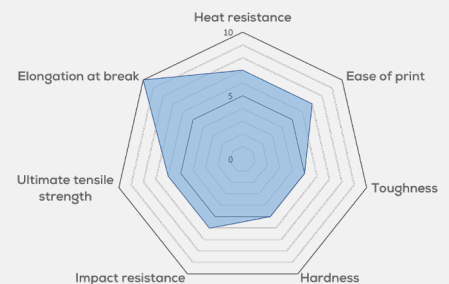
PC CF is an advanced 3D printing filament based on the PC 275 formulation, offering additional reinforcement with 10% carbon fiber. This unique combination provides higher mechanical strength, increased rigidity and excellent impact resistance, making PC CF an ideal choice for demanding engineering and industrial projects.

FEAUTURES

- 10% CF
- high impact strength & durability
- excellent mechanical properties
- good UV resistance
- dimensional stability
- low-warp technology

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