

PC/PTFE

MATERIAL PROPERTIES

Density	1.32 g/cm ³	ISO 1183
Mechanical Properties		
Charpy impact strength, Unnotched, at +23°C	50 kJ/m ²	ISO 179-1eU
Charpy impact strength, Notched, at +23°C	12 kJ/m ²	ISO 179-1eA
Tensile elongation at Yield *	3.0%	ISO 527 (1)
Tensile elongation at Break *	8.0%	ISO 527 (1)
Tensile strength at Break *	55 MPa	ISO 527 (1)
Elastic modulus **	2200 MPa	ISO 527 (1)
Thermal Properties		
VICAT Softening point ***	145°C	ISO 306
HDT 0.45 MN/m ² , annealed	140°C	ISO 75
HDT 1.81 MN/m ² , annealed	130°C	ISO 75
Flammability 3.0mm thickness	V-1	UL 94
Flammability 1.5mm thickness	HB	UL 94
Electrical Properties		
Electrical resistivity (surface)	1E12 ohm	D 257
Tribological properties		
Wear factor	4 10 ⁻⁷ mm ³ /(Nm)	D 3702
Friction Coefficient static	0.18	D 1894
Friction Coefficient dynamic	0.14	D 1894

* (speed 5mm/min), , at +23°C

** (speed 1 mm/min), at +23°C

***50 N (heating rate 50°C/h), injection moulding

GUIDELINE FOR PRINT SETTINGS*

Nozzle temperature	265-295°C
Bed temperature	90-120°C
Active cooling fan	0 - 10%
Layer height**	0.05 - 0.30 mm
Shell thickness**	0.40 - 2.70 mm
Print speed**	30-80 mm/s
Closed chamber	recommended
Dry box	not necessary
Ruby or hardened nozzle	not necessary
Adhesive required	YES (Magigoo PC)

* settings are based on a 0,4 mm nozzle.

** depending on the geometrical complexity

DESCRIPTION

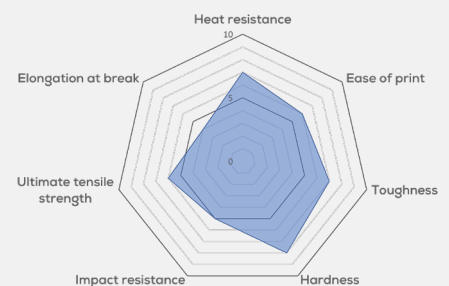
Spectrum PC/PTFE is an advanced polycarbonate-based (PC) composite filament with the addition of PTFE commonly known as teflon. The high demand and limited availability of additive manufacturing materials with very good mechanical properties, with particular emphasis on high abrasion resistance, led to the efforts aimed to combine great properties of PC and PTFE. Polycarbonate provides high mechanical resistance and PTFE complements other properties by reducing wear and friction.

FEAUTURES

- low processing shrinkage (linear) approx. 0.6%
- high abrasion resistance
- high mechanical strength
- very strong lamination of 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

PC/PTFE

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.