

PLA Pro

MATERIAL PROPERTIES

Specific Gravity	1.22 g/cm ³	D 792
MFR (210°C, 2.16kg)	9-15 g/10 min	D 1238
Peak Melt	165-180°C	D 3418
Mechanical Properties*		ASTM Method
Tensile Strength	40 Mpa	D 638
Tensile Modulus	2865 MPa	D 638
Flexural Strength	73 MPa	D 790
Flexural Modulus	2414 MPa	D 790
Notched Izod Impact [amorphous]	160 J/m	D 256
Notched Izod Impact [crystalline]	233 J/m	D 256
Thermal Properties*		
Heat Distortion Temperature	75-85°C	E 2092
Glass Transition Temperature	55-60°C	D 3418

* 3D printed at 100% infill and annealed at 110°C/20 min, XY axis

GUIDELINE FOR PRINT SETTINGS*

Nozzle temperature	185-230°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**	40-150 mm/s
Closed chamber	not necessary
Dry box	not necessary
Ruby or hardened nozzle	not necessary

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

** depending on the geometrical complexity

DESCRIPTION

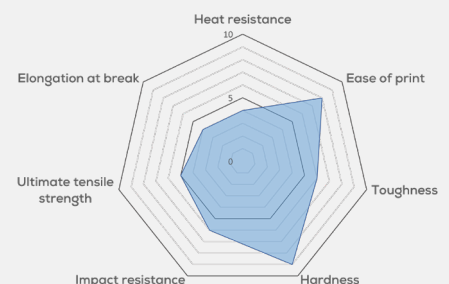
Spectrum PLA Pro is a material based on modified PLA dedicated to the manufacturing of filaments for 3D printing. Through the orientation of the chemical composition of the material the advantages of PLA and ABS were successfully combined. It is thus feasible to obtain a high impact resistance of printed items with a high tensile resistance and substantial rigidity, which is typical for PLA-based materials.

FEAUTURES

- good alternative for styrene-based materials
- extremely high impact resistance as compared to classic materials based on PLA
- impact resistance nearly 50% higher than classic ABS material
- high durability comparable to ABS prints
- higher process capacity due to the possibility to increase the printing speed (as a consequence of improved flowability)
- perfect side surface

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

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.