

PP

MATERIAL PROPERTIES

Specific gravity	0.89 g/cm ³	ISO 1183-3
Water absorption, 23°C/24h	<0.3%	ISO 62
Melt flow rate (MFR), 230°C / 2,16kg	7.5 g/10 min	ISO 1133

Mechanical Properties at 23°C / 50% rh

Tensile strength (dry, at 50 mm/min)	17 MPa	ISO 527
Elongation at max. force (dry, at 50 mm/min)	6,00%	ISO 527
Elongation at break (dry, at 50 mm/min)	500,00%	ISO 527
Flexural modulus (dry, at 2 mm/min)	0.95 GPa	ISO 178
Charpy impact strength, notched (dry)	65 kJ/m ²	ISO 179 1eA
Charpy impact strength, notched (-30°C)	10 kJ/m ²	ISO 179 1eA

Thermal Properties

VICAT Softening temperature (VST A)	135°C	DIN ISO 306
Heat Distortion Temperature (HDT B)	80°C	ISO 75

Electrical Properties

Insulation resistance (strip electrode R25)	>10 ¹² Ω	DIN IEC 60167
Surface resistance (ROB)	>10 ¹² Ω	DIN IEC 60093

GUIDELINE FOR PRINT SETTINGS*

Nozzle temperature	265-295°C
Bed temperature	95-120°C
Active cooling fan	0 - 35%
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 PP)

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

** depending on the geometrical complexity

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

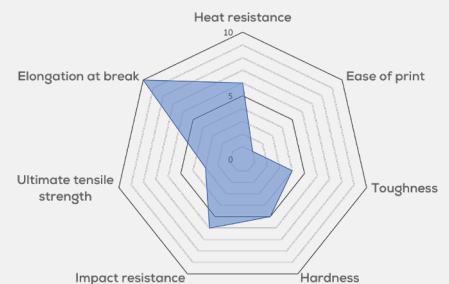
Spectrum PP is a new material based on a random unfilled copolymer polypropylene material. It has good mechanical properties combined with outstanding chemical resistance and low density. Our material does not require a heated building chamber to be printed and it exhibits enhanced layer bonding, thus reducing the anisotropy of the final part.

FEAUTURES

- low processing (linear) shrinkage up to 0.3%
- high impact resistance
- easy separation of the object from the bed
- high mechanical strength
- chemical resistance to lubricants and oils
- a wide range of applications
- very robust 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