

# ASA Kevlar

## MATERIAL PROPERTIES

Density	1.07 g/cm <sup>3</sup>	ISO 1183
<b>Mechanical properties</b>		
Charpy impact strength, unnotched*	25 kJ/m <sup>2</sup>	ISO 179-1eU
Charpy impact strength, notched*	7,5 kJ/m <sup>2</sup>	ISO 179-1eA
Tensile Elongation at Yield*	2,80%	ISO 527 (1)
Tensile Elongation at Break*	6,00%	ISO 527 (1)
Tensile Strength at Yield*	40 MPa	ISO 527 (1)
Tensile Strength at Break*	35 MPa	ISO 527 (1)
Elastic modulus tensile* (speed 1mm/min)	2200 Mpa	ISO 527 (1)
<b>Thermal properties</b>		
VICAT Softening point* 50N	94°C	ISO 306
Heat Deflection Temperature		
0.45mn/m <sup>2</sup> *	89°C	ISO 75
1.81mn/m <sup>2</sup> *	79°C	ISO 75

\*injection moulding

## GUIDELINE FOR PRINT SETTINGS\*

Nozzle temperature	240-270°C
Bed temperature	80-100°C
Active cooling fan	0 - 25%
Layer height**	≥ 0.15 mm
Shell thickness**	0.40 - 2.70 mm
Print speed**	30-70 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

## 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

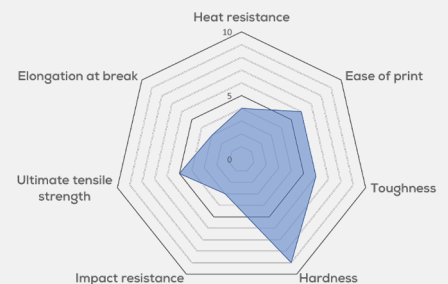
Spectrum ASA Kevlar filament is a technical composite material based on a combination of ASA copolymer and aramid fibres. The aim of producing composite materials by combining different types materials is to impart new properties, previously unattainable for separate components. As a base for the composite, we used the ASA copolymer, well known for its high resistance to weather conditions, combining it with aramid, which is used to make some of the strongest synthetic fibres.

## FEAUTES

- Aramid fibers reinforced (10%)
- good aging resistance
- very strong impact resistance
- relatively high chemical resistance
- UV resistance
- printable on desktop devices without a heated chamber
- matt 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](mailto:support@spectrumfilaments.com)