

ABS Kevlar

MATERIAL PROPERTIES

Density	1.05 g/cm ³	ISO 1183
Mechanical Properties		
Charpy impact strength		
Unnotched, injection moulding	14 kJ/m ²	ISO 179-1eU
Notched, injection moulding	6.1 kJ/m ²	ISO 179-1eA
Tensile Elongation at Yield *	1.9%	ISO 527 (1)
Tensile Elongation at Break *	6,00%	ISO 527 (1)
Tensile Strength at Yield *	35 MPa	ISO 527 (1)
Tensile Strength at Break *	30 MPa	ISO 527 (1)
Elastic modulus (speed 1 mm/min)	2350 MPa	ISO 527 (1)
Thermal Properties		
VICAT Softening point **	95°C	ISO 306
HDT 0.45 MN/m ² , annealed	88°C	ISO 75
HDT 1.81 MN/m ² , annealed	75°C	ISO 75

*speed 5mm/min

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

GUIDELINE FOR PRINT SETTINGS*

Nozzle temperature	250-270°C
Bed temperature	100°C
Active cooling fan	0 - 25%
Layer height**	≥ 0.15mm
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	recommended

* 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

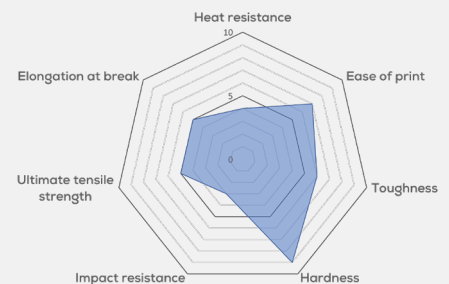
Spectrum ABS Kevlar is a structural composite filament based on ABS with the addition of aramid fibers, commonly known as Kevlar. The demand for properties better than those offered by standard ABS, for durability and for increased tensile strength set in motion actions aimed at combining the very good properties of ABS with aramid fibers. The applied modifications led to reduced shrinkage, excellent adhesion to work platforms and reduced material density, which means that the printed elements are slightly lighter than their counterparts made with standard ABS.

FEAURES

- industrial-grade material
- material enriched with aramid fibres
- high rigidity and impact strength
- high mechanical strength
- very strong layer lamination

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