

TECHNICAL DATA SHEET

ABS GP450

MATERIAL PROPERTIES

Specific Gravity	1.04 g/cm ³	ISO 1183-1
Melt Flow Rate (220°C, 10kg)	18 cm ³ /10'	ISO 1133
Mechanical Properties		
Yield Stress (50mm/min)	39 MPa	ISO 527-1,2
Elongation at Break (1mm/min)	13,00%	ISO 527-1,2
Tensile Modulus (1mm/min)	2100 MPa	ISO 527-1,2
Flexural Modulus (2mm/min)	2000 MPa	ISO 178
lzod Impact Strength, Notched @ 23°C	19 KJ/m²	ISO 180-1A
lzod Impact Strength, Notched @ -30°C	10 KJ/m ²	ISO 180-1A
Ball Indentation Hardness	95 N/mm ²	ISO 2039-1
Thermal Properties		
Vicat Softening Temperature	95°C	ISO 306
Burning behavior (1,6mm)	HB	UL94

GUIDELINE FOR PRINT SETTINGS*

Nozzle temperature	235-255°C	
Bed temperature	100°C	
Active cooling fan	0 - 25%	
Layer height**	0.05 - 0.30 mm	
Shell thickness**	0.40 – 2.70 mm	
Print speed**	30-200 mm/s	
Closed chamber	recommended for larger prints	
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 Spectum Group Sp. z o.o. materials in any particular application.

DESCRIPTION

Spectrum ABS GP450 is an industrial grade, construction filament for 3D printing. It is a material with an amorphous structure, its popularity is due to high impact strength, hardness, and relatively high scratch resistance. The composition of the material – compared to classic ABS – has been optimized for additive manufacturing, which allows printing at a very high speed (up to 200mm/s) without any mechanical properties losses ABS GP450 exhibits much higher mechanical strength than other similar materials available on the market.

FEAUTURES

- industrial grade material
- high impact resistance
- scratch resistance
- high mechanical strength
- high speed printing (200mm/s) without quality losses
- 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