

ABS Medical

MATERIAL PROPERTIES

Specific Gravity	1.06 g/cm ³	ISO 1183-1
Melt Flow Rate (220°C, 10kg)	18 cm ³ /10'	ISO 1133

Mechanical Properties

Yield Stress (50mm/min)	47 MPa	ISO 527-1,2
Elongation at Break (1mm/min)	16,00%	ISO 527-1,2
Tensile Modulus (1mm/min)	2450 MPa	ISO 527-1,2
Flexural Modulus (2mm/min)	2500 MPa	ISO 178
Izod Impact Strength, Notched @ 23°C	14 KJ/m ²	ISO 180-1A
Izod Impact Strength, Notched @ -30°C	7 KJ/m ²	ISO 180-1A
Ball Indentation Hardness	120 N/mm ²	ISO 2039-1

Thermal Properties

Vicat Softening Temperature	97°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**	30-150 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

DESCRIPTION

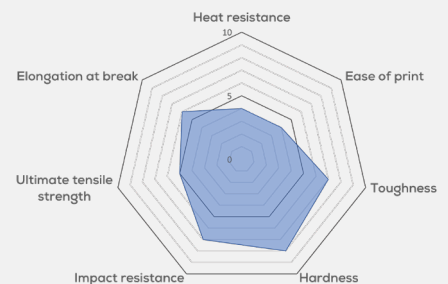
Filament Spectrum Medical ABS is a highest-quality material designed specifically for medical applications. This 3D printing filament has been manufactured using ABS pellets that meet the biocompatibility requirements of USP Class VI or ISO 10993-1 certifications, which guarantees that it is biocompatible up to 30 days in contact with the human body (topical use). Spectrum Medical ABS filament is food contact approved according to EU No 10/2011 and 21 CFR FDA regulations.

FEAUTURES

- biocompatible up to 30 days in contact with the human body
- 3D print of personalized, lightweight prostheses
- manufacturing of support structures for rehabilitation
- high speed printing 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