TECHNICAL DATA SHEET

Premium ABS Medical
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Premium ABS Medical Filament for Professional Medical 3D Printing

FormFutura Premium ABS Medical is a high-performance, medical-grade ABS filament. It is developed specifically for professional medical 3D printing applications. This filament combines excellent mechanical performance with strict regulatory compliance, making it ideal for demanding medical environments.

Premium ABS Medical is biocompatible for up to 30 days of skin and body contact and complies with internationally recognized ISO 10993 biocompatibility standards as well as U.S. Pharmacopeia (USP) Class V requirements for plastics.

Medical Compliance & Certifications

FormFutura Premium ABS Medical complies with the following ISO 10993 biocompatibility standards and U.S. Pharmacopeia (USP) classes for plastics.

- ISO 10993-1, ISO 10993-3, ISO 10993-4, ISO 10993-5, ISO 10993-6, ISO 10993-11, ISO 10993-12.
- USP Class V.

In addition, this medical-grade ABS filament is food contact safe, complying with EU Regulation No. 10/2011 and FDA 21 CFR food contact regulations.

Optimized for Medical 3D Printing

FormFutura Premium ABS Medical is engineered for excellent printability and superior interlayer adhesion, which results in strong, reliable and dimensionally stable printed parts. This makes it an ideal filament for 3D printing lightweight, patient-specific prosthetics and patient-tailored rehabilitation solutions, where comfort, fit and performance are essential.

Important key features of Premium ABS Medical

- Medical-grade ABS filament that is biocompatible for up to 30 days in contact with the human body.
- Compliant with ISO 10993 standards and certified to USP Class V.
- Food contact safe (EU & FDA compliant.
- Compatible with all AMS systems.
- EU-Made Premium Quality Filament spooled on recycled certified second-life PP spools.

Suitable applications for Premium ABS Medical

- Customized prosthetics and orthotics.
- Medical tools and aids.
- Functional medical prototypes.
- Short-term medical devices.
- Rehabilitation support frames and assistive medical supports.

Recommended print settings

Nozzle temp: ± 235 - 260°C	**Heat bed:** ± 90 - 100°C	**Fan speed:** ± 0 - 25%
Print speed: ± 50 - 150 mm/s	**Nozzle:** ≥ 0.15mm	**Buildplate adhesion:** EasyFix Nr. I
Drying: 4-6 hours @ 70-85°C	**Drybox:** Recommended	**Enclosure:** Yes
Experience level: Intermediate		

Material properties	**Typical value**	**Test Method**
Specific Gravity	1.06 g/cm3	ISO 1183-1
MFR (220°C, 10kg)	18 cm^3/10’	ISO 1133

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Mechanical properties

Yield Strength	48 MPa	ISO 527
Tensile elongation at break	16%	ISO 527
Tensile modulus	2475 MPa	ISO 527
Flexural Modulus	2524 MPa	ISO 178
Izod notched impact strength (at 23°C)	14 KJ/m2	ISO 180
Izod notched impact strength (at -30°C)	7 KJ/m^2	ISO 180

Thermal properties

Vicat softening temperature	96°C	ISO 306

Buildplate adhesion

For optimal buildplate adhesion we recommend to use our EasyFix Adhesive – Nr. I.

Storage and handling

Filament should be stored at room temperature in a dry and dark place with humidity below 15%. 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. To obtain the best parameters of the printed object, it is recommended to dry the material prior to usage and to 3D print it directly from a dry box.

Product export information

HS Code	Description	Origin
39169090	Monofilament for 3D printing	European Union

Packaging & Logistics Information

Material	Spool weight	Spools per master box	Spools per EURO pallet
Premium ABS Medical	1,000 g (1 kg)	10	400
Premium ABS Medical	2,300 g (2.3 kg)	5	120
Premium ABS Medical	4,500 g (4.5 kg)	1	90
Premium ABS Medical	8,000 g (8 kg)	1	60

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