




NEW! PEEK-OPTIMA™ AM FILAMENT

A new implantable PEEK polymer form
optimized for 3D printing

Let's push medical device design to the limit



A close-up photograph of a 3D printer nozzle printing a blue, textured, rectangular part on a rotating platform. The background is blurred, showing other parts of the printer and a laboratory setting. The image is overlaid with a white diagonal shape on the left side.

NEAR-ZERO WASTE, EFFICIENT 3D PRINTING OF MEDICAL IMPLANTS

The increasing complex designs, and the move towards patient-specific custom implants, means that the medical device industry demands new ways of manufacturing devices either at the point of care or at industrial production sites. PEEK-OPTIMA™ AM Filament gives you all the benefits of trusted PEEK-OPTIMA polymers, plus easier manufacturing via a range of production routes:



**Industrial manufacturing
of medical devices**



**Point of care 3D printing
of custom medical devices**



The new **PEEK-OPTIMA AM** Filament is designed to meet all Fused Filament (FF) and Fused Deposition Modeling (FDM) processing needs, and designers can benefit from easier manufacturing combined with the demonstrable clinical and mechanical benefits^[1] of PEEK-OPTIMA polymers ^[1]:



Biocompatibility



Broad regulatory clearances globally



Modulus similar to bone



Reduced stress shielding



Artifact-free imaging



Lightweight compared to metal



Strong, durable and highly resistant to creep and fatigue



1.75mm filament for ease of manufacture with FF/FDM compatible 3D printing machines



High chemical resistance



Ability to be repeatedly sterilized using steam, ethylene oxide (EtO) or gamma sterilization / irradiation without degradation in mechanical properties or biocompatibility

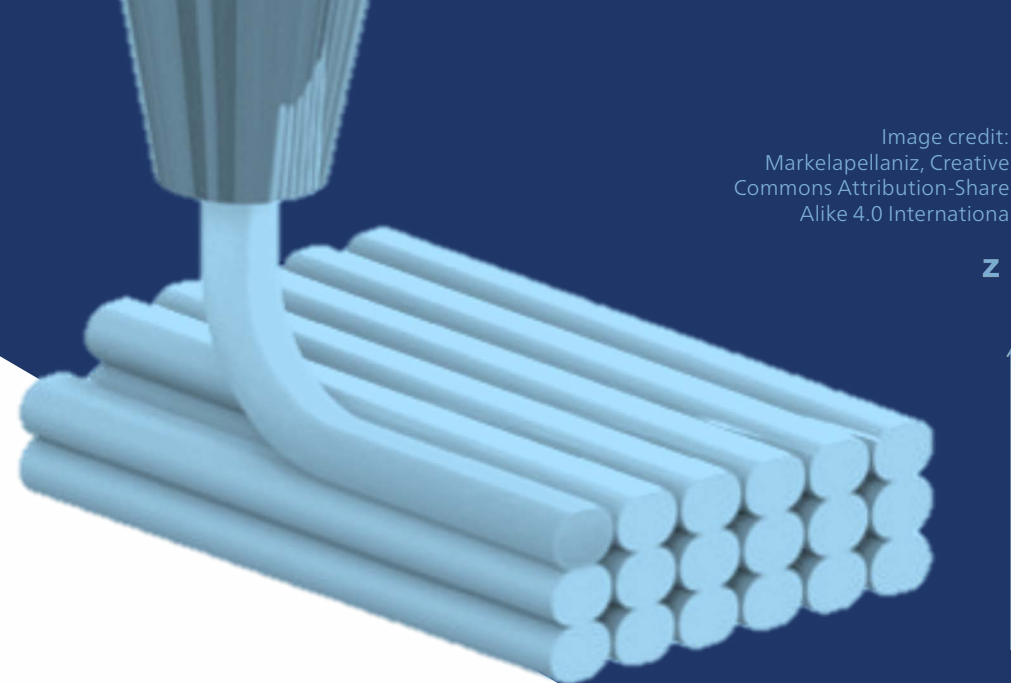


Extremely low levels of extractables and leachables



Excellent mechanical properties such as stiffness, toughness and durability

[1] References available on request



WHAT IS FF 3D PRINTING?

Additive manufacturing methods provide a solution, and another process to expand on conventional manufacturing processes such as injection moulding or machining.

FF 3D printing, or fused filament fabrication, is an additive manufacturing process in which thermoplastic material is pushed through a heated nozzle to create objects layer by layer.

Additive Manufacturing Value:

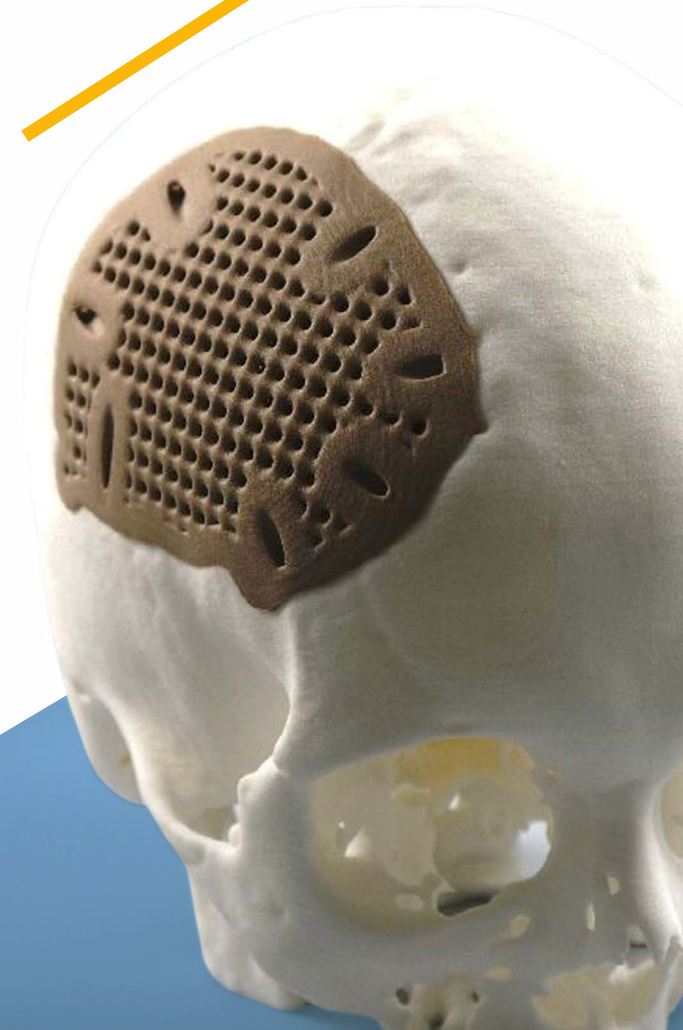
- ▶ Design flexibility
- ▶ Cost saving
- ▶ Capital efficiency
- ▶ Speed to market
- ▶ Patients benefit from optimal anatomical implant fitting and accelerated manufacturing times



CLINICAL APPLICATIONS

PEEK-OPTIMA AM Filament offers nearly unlimited medical design and manufacturing flexibility across highly diverse applications requiring implantation or blood, bone and tissue contact for greater than 30 days, including:

- ⊕ Spinal interbody fusion
- ⊕ Dental implant prosthetics
- ⊕ Craniomaxillofacial implants
- ⊕ Orthopedic and sports medicine



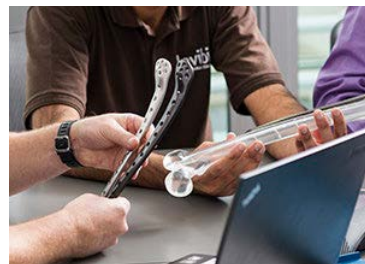
MEETING THE NEEDS OF MEDICAL DEVICE COMPANIES, SURGEONS AND PATIENTS

Invbio is committed to developing solutions that can bring significant advantages for patients and surgeons. We are more than a biomaterials provider; we are a partner that can add value to all stages of a medical device product lifecycle.



EVALUATE NEW MARKETS

Utilizing multiple approaches to gain insight into patient and clinician challenges and health economic impact



EXPEDITING MARKET ADOPTION

Generating clinical evidence and collaborating with KOLs to drive market adoption; offering our partners technical, marketing and sales support.



PRE-LAUNCH TECHNOLOGY SUPPORT

Collaborating with universities and our partners to determine performance criteria and address risks



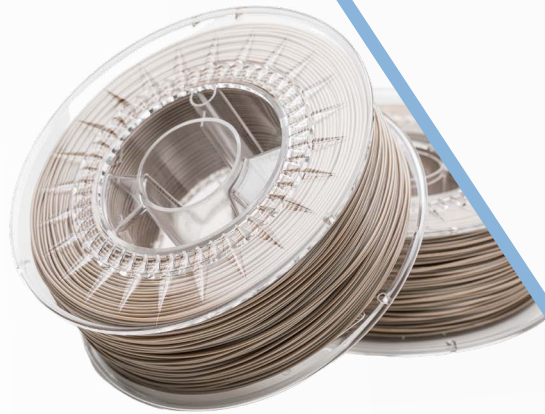
SUPPORTING REGULATORY PROCESSES

Partnering to identify regulatory pathways in support of fast tracking clearance.



VALIDATING PERFORMANCE

Collaborating with universities and our partners to determine performance criteria and address risks.



Get started with 3D Printing PEEK-OPTIMA™ today

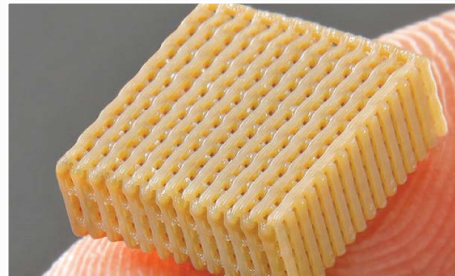
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Why 3D printing with PEEK is hard
and how we are making it easier

[WATCH VIDEO](#)



Learn more about Invibio's additive
manufacturing solutions

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