



AM for Orthotics & Prosthetics

**Discover Materials and Solutions from
BASF Forward AM.**



They trust us



Individuality. Reliability. Adaptability.

Limitless individualization options, improved patient comfort, and on-demand and on-site manufacturing at the point-of-care, Additive manufacturing opens endless possibilities for orthotics and prosthetics.

Innovators in orthotics and prosthetics are increasingly thinking additive. Together with disruptive start-ups and major industry leaders we have realized projects that shape the future of patient care.

3D printing is at your fingertips. Let's make unprecedented comfort and radically new ways of manufacturing a reality – for both patients and O&P professionals.



Victoria Hand Project

Material: Ultrafast® PLA PRO1

Technology: FFF

Affordable prosthetic care where it's needed most

Both geography and limited infrastructure can greatly reduce access prosthetic care. With 3D Printing disabled individuals can be fitted for a custom-made prosthesis in a matter of days.

Victoria Hand Project turned to the combination of Ultrafuse® PLA PRO1 and UltiMaker® FFF 3D printers to expertly equip clinics to produce high-quality, low-cost prosthetics throughout developing countries.

- **31 printed parts per prosthetic hand**
- **24hr print time for a complete prosthetic hand**

[Read the use case](#)





Proffit

Material: Ultrasint® TPU01

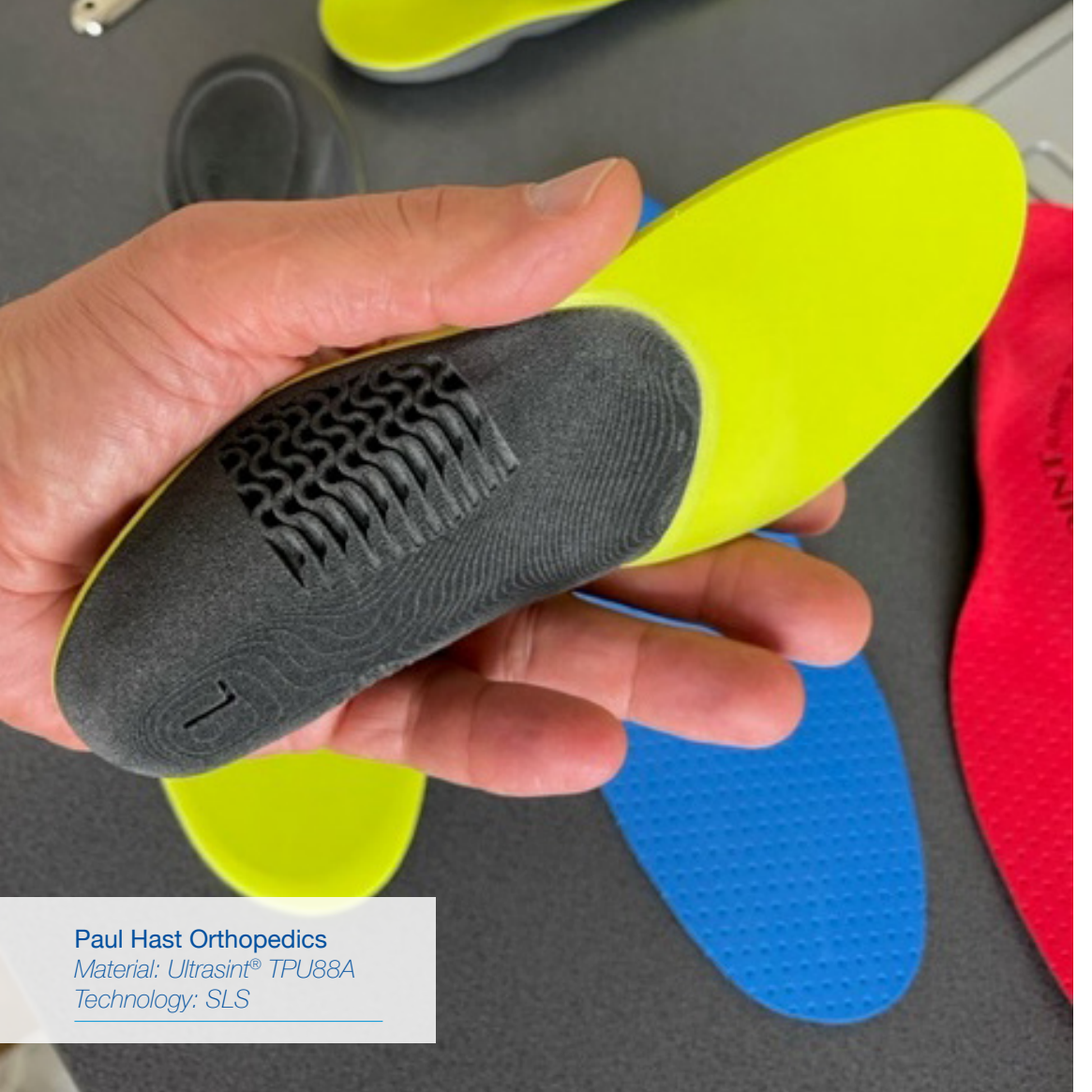
Technology: Multi Jet Fusion

Perfect-fit 3D Printed Prosthetic Socket

Most amputees requiring prosthetic limbs often deal with uncomfortable, poorly fitting sockets. Inspired to offer a better option, the leaders at ProsFit collaborated with the experts at BASF Forward AM in developing innovative strategies and cutting-edge materials to accomplish just that. Using two high-performance polymer powders, Ultrasint® TPU01 and Ultrasint® TPU 88A, ProsFit designed and fabricated a prosthetic socket delivering a much higher level of comfort resulting in a better quality of life for the wearer. The utilization of the principles of Additive Manufacturing also greatly accelerated the design and production process.

[Read the use case](#)





Paul Hast Orthopedics

Material: Ultrasint® TPU88A

Technology: SLS

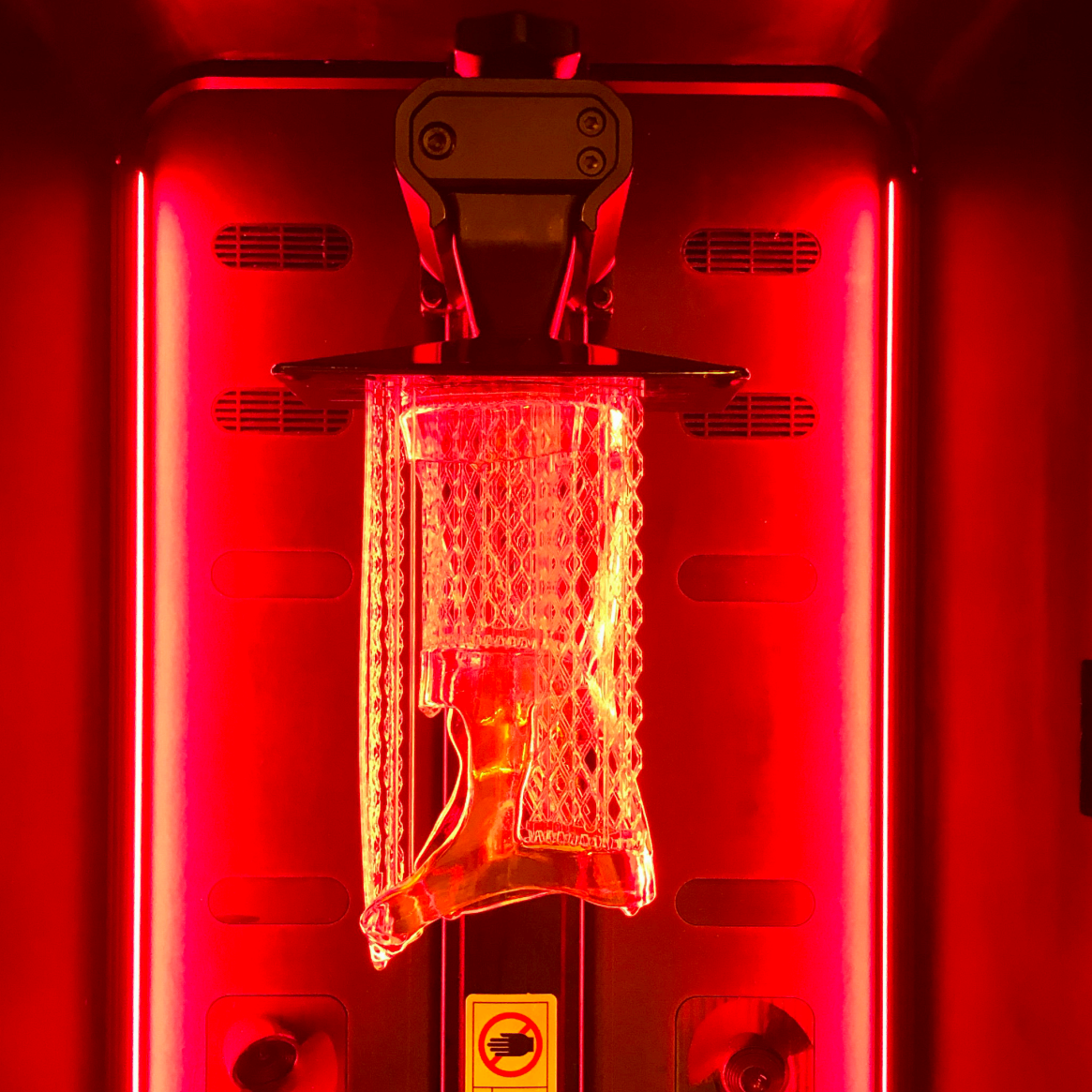
On-demand custom printed insoles

The ideal combination of Ultrasint® TPU88A and SLS 3D printing allowed Paul Hast Orthopedics to take advantage of a growing trend in the market, an increasing interest in orthopedic insoles for healthy, active lifestyles.

Traditional production methods limited their capacity to create completely customized orthotics at scale. With scanning technology, lattice generation software and 3D printing, Paul Hast Orthopedics is able to quickly and cost-effectively produce individualized orthotics at scale.

[Read the use case](#)





High-performing materials when quality matters most

Reliability and durability are central to Forward AM's material development. Materials suited for orthotics and prosthetics applications have been tested for biocompatibility according to ISO 10993 (cytotoxicity, skin irritation, skin sensitization).

Our material portfolio carries polymer powders, filaments and photopolymers for all major 3D printing technologies. Ranging from rigid to robust and flexible materials, we have the right material in store for a vast array of orthopedic devices. Post-processing techniques such as surface smoothing, coating or drilling are also easily possible - as well as smooth integration in established O&P workflows.



Detroit - Heidelberg - Shanghai

forward-am.com

Speak to our experts today to discover our materials and solutions for orthotics and prosthetics applications.

