

# Fashionable and Forward-Thinking 3D Printed Shoes

**HILOS Leads the Way in Comfortable  
and Sustainable Footwear**

## OVERVIEW

The American startup HILOS is combining Additive Manufacturing and expert handcraftsmanship to produce unique footwear. An essential element of their vision is to be as sustainable as possible while manufacturing shoes. This is also one of the reasons why they count on Additive Manufacturing: it allows them to only produce a pair of shoes when it has been ordered – vastly reducing waste and overproduction!

## QUICK FACTS

### Material:

- Ultrasint® TPU01

### Technology:

- HP Multi Jet Fusion

### Partner:



**HILOS**  
MAKE WHAT MOVES YOU

HILOS, a Portland-based startup founded in 2019, makes shoes by combining 3D printing and leatherworking. A finalist for the “Forward AM Innovation Award”, the young company offers a collection of 100% recyclable heeled shoes. This cutting-edge footwear is the result of designers, engineers, and artists pioneering a new way forward, powered by technology, driven by design and anchored in sustainability.

[HILOS.CO](https://HILOS.CO)



48% reduction in  
CO2 emissions



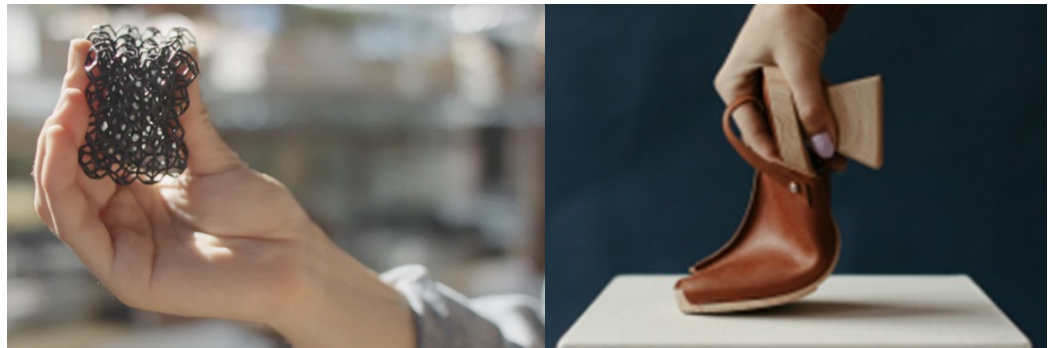
Uses 99% less  
water than  
traditional  
manufacturing



Eco-friendly, fully  
recyclable body

## Challenge: Combine technology and craftsmanship to create innovative and durable footwear

Focusing on both quality and durability, HILOS chose Forward AM's [Ultrasint® TPU](#) for its strong, flexible and durable part performance, combined with an excellent surface quality and level of detail. Ultrasint® TPU01 opens unlimited design possibilities: it is extremely easy to print, has a very high process stability, and has one of the highest outputs for flexible materials in the 3D printing market. The combination of Additive Manufacturing, innovative materials and craftsmanship allows HILOS to provide their customers with custom-fit, durable footwear that's made to last



## Challenge: Utilize sustainable and recyclable materials to reduce carbon footprint

The reusability of Ultrasint® TPU allowed HILOS to advance towards complete product recyclability as the print process produces little to no material waste. According to Forward AM internal studies, Ultrasint® TPU shows zero degradation post-printing, allowing it to be ground down after use and subsequently utilized for injection molding. HILOS also offers consumers and partner brands the opportunity to send shoes back at the end of life, therefore enabling a circular future for footwear. Further studies by HILOS also showed that 3D Printing can save up to 99 percent of water compared to traditional footwear manufacturing and reduce CO2 emissions by about 48 percent.

Read more information about HILOS and Ultrasint® TPU recycling [here](#).

### Learn more about Ultrasint® TPU01

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