MAKERS MONTHLY

October 2022

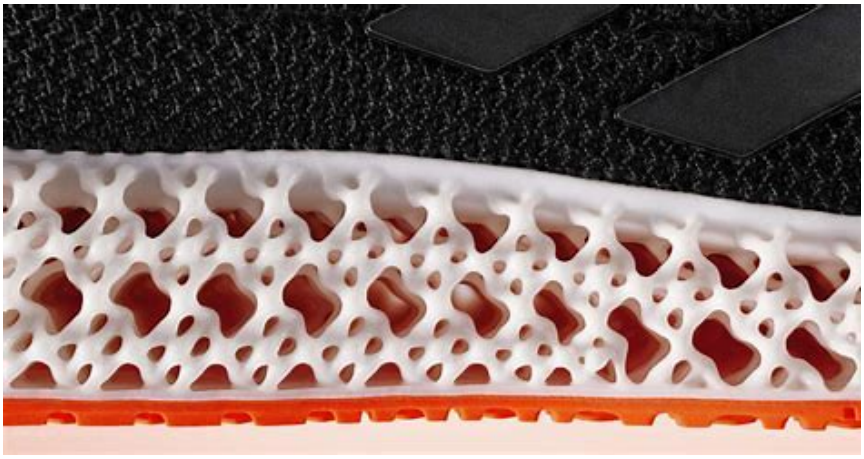
Written by MO3D

Photo courtesy of Adidas
Adidas 4DFWD 2 Shoes with a 3D printed midsole.

3D Printing Shoes

Why 3D Print a Shoe?

When you think of 3D printing, you often think of a long but detailed process which would not be ideal for mass producing a product like a shoe. Adidas thinks otherwise, partnering with Carbon, a digital manufacturing company, to produce a more comfortable and better shoe that can be produced at record speeds. Carbon developed a custom material, 40% of which is made out of plants, which is strong and flexible enough to withstand the weathering that shoes are put through. The lattice shown below was designed in a way that transforms downward impacts into forward motion.



3D printed lattice transforms downward impact energy into forward motion.

Carbon's 3D printers are able to print a single midsole in 30 minutes. Usually with traditional resin cured 3D printing, the parts are washed in IPA (Isopropyl

Alcohol) to get rid of excess resin. This process produces a lot of non-recyclable waste. Carbon, on the other hand, uses centrifugal force to their advantage so that they can spin the excess resin off which can then be reused, keeping lots of waste from going to the landfill.

So why is 3D printing an ideal way to make a shoe like Adidas's 4DFWD? Well... 3D printing is able to capture the detailed lattices in a shoe like this as well as quickly transform an idea, like a lettuce soled shoe, and create a product which in most cases takes years with traditional manufacturing methods.

Thank you for reading our article!

We would love your input for our future article topics **HERE**.

You can also check out our website at **www.mo-3d.com** to order custom 3D printed parts of your own.

See our products **HERE**.

SINCERELY MO3D TEAM