

OESH® Shoes 3D Prints 100% Recyclable Soles Using Huntsman TPU Elastomers



THE WOODLANDS, Texas – OESH® Shoes (OESH), the U.S. footwear brand that makes women's shoes that are "healthy by design," has been evaluating how Huntsman's thermoplastic polyurethane (TPU) materials can be used to create a 100% recyclable shoe sole via 3D printing – with positive results.

Founded by Casey Kerrigan, a Harvard M.D., OESH Shoes has been providing women with innovative, healthy footwear since 2011. As an internationally known researcher, who studied the effects of footwear on health, Kerrigan discovered that many common features of shoes can adversely affect posture and joints. She subsequently created OESH Shoes to translate her research findings into the design of healthy shoes.

When OESH contacted Huntsman, seeking advice about the ideal material to use for 3D printing soles, Huntsman's footwear team recommended TPU materials that had the specific comfort and performance properties OESH desired. Keen to offer environmentally-conscious customers a fully recyclable shoe, Kerrigan and Huntsman worked together to evaluate the material and determine whether it could be shredded at the end of the shoe's life cycle and recycled for re-use.

OESH put Huntsman's TPU to the test – producing a series of soles using OESH's unique 3D printing technique, which creates parts directly from pellets. The soles were then recycled into pellets and put back into the 3D manufacturing process. The next step was to test the

new recycled sole against those made from virgin materials. Results showed that the recycled sole had the same functionality as the original sole – with no drop-in performance properties.

Casey Kerrigan said: “At OESH Shoes we are committed to making shoes that are not only the healthiest shoes on the planet, but also the healthiest shoes for the planet. We are constantly innovating and developing new technologies and manufacturing processes that minimize carbon emissions, toxins and waste. We are excited about our latest discovery – that using Huntsman’s TPU elastomers, OESH’s signature soles are now not only 100% healthy, but 100% recyclable.”

Jason Smith, Global Innovation Project Manager at Huntsman, said: “As a business, we are committed to helping our customers meet their sustainability ambitions – whether that’s delivering products that require less energy to process or supplying materials that can be recycled back into new items at the end of their life. We are pleased to have worked with the team at OESH Shoes – giving them the means to create a fully recyclable shoe, which can have a positive impact on the environment, as well as on the wearer’s health.”

For more information about Huntsman’s range of TPU elastomers and their use in the footwear industry, please contact: paola_palma_faoro@huntsman.com or visit: <https://www.huntsman.com/markets/footwear>

For more information about OESH Shoes, go to: <https://oeshshoes.com/>

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About Huntsman:

Huntsman Corporation is a publicly traded global manufacturer and marketer of differentiated and specialty chemicals with 2019 revenues of approximately \$7 billion. Our chemical products number in the thousands and are sold worldwide to manufacturers serving a broad and diverse range of consumer and industrial end markets. We operate more than 70 manufacturing, R&D and operations facilities in approximately 30 countries and employ approximately 9,000 associates within our four distinct business divisions. For more information about Huntsman, please visit the company's website at www.huntsman.com.

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Forward-Looking Statements:

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