EnvisionTEC Launches its Strongest 3D Printing Material Ever, Showcased in the World's Longest 3D Printed Chain

- E-RigidForm is a strong, durable material that is suitable for end use products and comes in amber and charcoal
- The new material is being displayed in a 328-foot chain that was 3D printed in one piece on an EnvisionTEC Xede 3SP
- The EnvisionTEC Mega-Chain will be on display April 24-26 in Fort Worth, Texas, at RAPID + TCT, the premier 3D printing event in North America

DEARBORN, Mich., Friday, April 20, 2018 — EnvisionTEC, a leading global manufacturer of desktop and full-production 3D printers and materials, today launches a groundbreaking new material, E-RigidForm, showcasing it in a 328-foot 3D printed chain.

A polyurethane-like resin that 3D prints hard and stiff parts, E-RigidForm is ideal for both prototypes and end use parts. With a high tensile strength of 68-73 MPa at 7% elongation at break, E-RigidForm is one of the most durable printing materials ever developed in 3D printing.

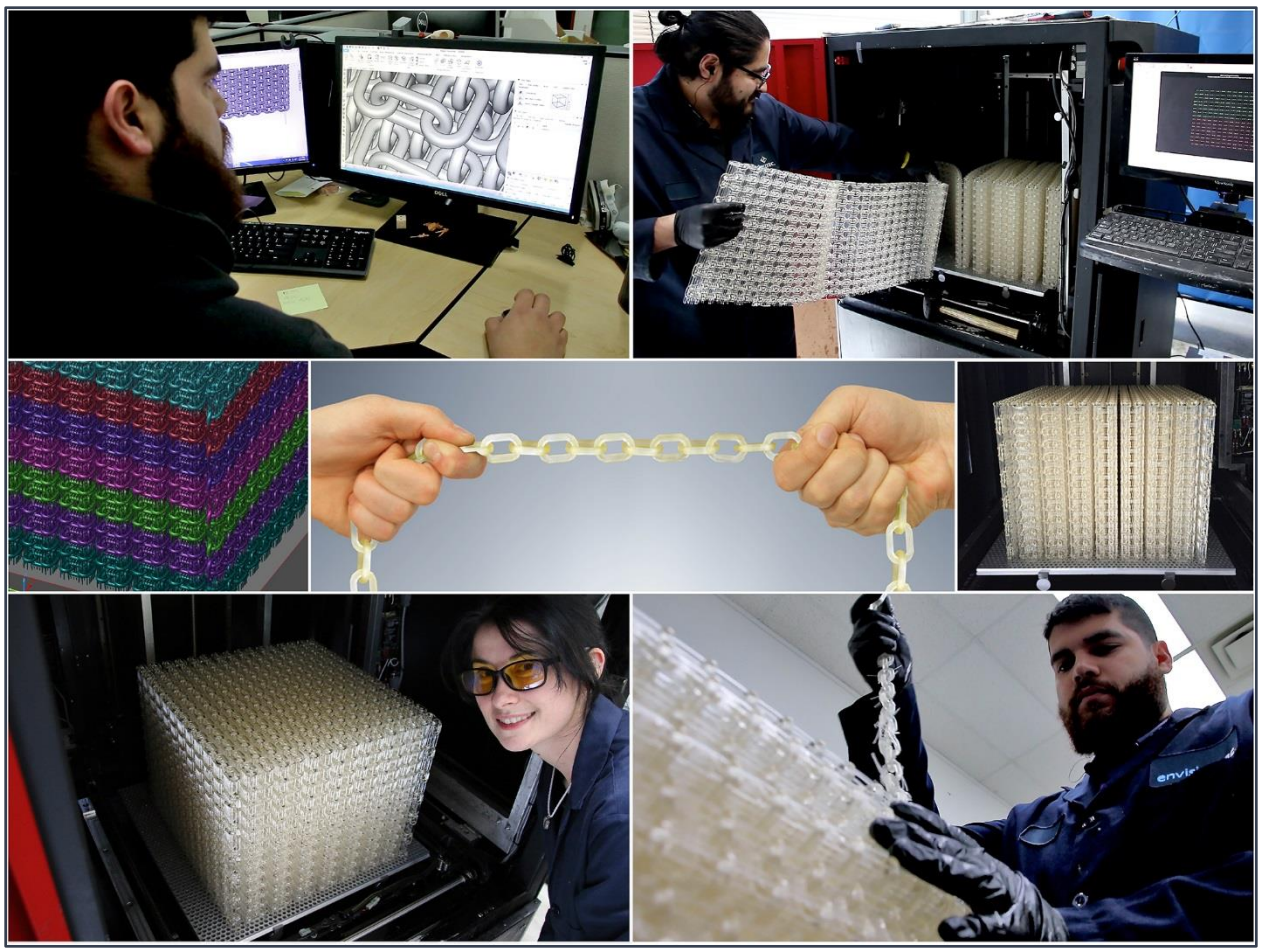
The strength of E-RigidForm enabled EnvisionTEC to 3D print the world's longest resin chain in a single piece. Weaker materials would have sagged during printing such a long and heavy item, causing a print failure. The chain was 3D printed on EnvisionTEC's largest resin printer, an Xede 3SP, which offers a build area of 18 x 18 x 18 inches.

"E-RigidForm is a breakthrough material for use on our 3SP line of 3D printers, which offer very large build areas without sacrificing speed and accuracy," said CEO Al Siblani. "A print job of this size and complexity would not have been possible before, simply because of the stiffness required during the 3D printing process for so many links and layers."

The EnvisionTEC Mega-Chain took more than two weeks to design and features more than 6,144 links, each measuring 1.5 inches, arranged in 16 layers. It was printed unattended over 99 hours spanning more than four days. The project was so complex it required a computer with extreme processing power to generate the layers and supports for the print job.

The chain was designed by EnvisionTEC 3D Builder Robert Montes with digital processing and 3D printing support from colleagues Erica Finkowski, Jason Spurlock and Josue Nunes.

The Mega-Chain will be on display April 24-26 in Fort Worth, Texas, at RAPID + TCT, the premier event for 3D manufacturing in North America.



The EnvisionTEC Mega-Chain is a 328-foot chain that was 3D printed in a durable new material, E-RigidForm. Designed by EnvisionTEC 3D Builder Robert Montes (upper left and lower right), the chain features 6,144 links, each measuring 1.5 inches. The print job was processed with support from colleagues Erica Finkowski (lower left), Josue Nunes (upper right) and Jason Spurlock (not shown).

A Refreshed Materials Lineup

E-RigidForm joins an industry-leading materials portfolio at EnvisionTEC that now features 50 materials.

EnvisionTEC recently clarified its collection of materials, focusing on those that deliver the best performance and functionality for their applications, such as:

- prototypes and end use parts
- investment casting
- high heat resistance
- thin walls and high detail
- transparency

- tooling for molds
- jigs and fixtures
- specific hardness requirements, or
- specific medical uses

In the dental, hearing aid and bioprinting markets, EnvisionTEC offers CE- and FDA-approved biocompatible materials, including materials suitable for long-term use in the body.

About EnvisionTEC

EnvisionTEC is a leading global provider of professional-grade 3D printers and materials. Founded in 2002 with its pioneering commercial DLP printing technology, EnvisionTEC now sells 3D printers based on six distinct technologies that build objects from digital design files. The company's premium 3D printers serve a variety of medical, professional and industrial markets, and are valued for accuracy, surface quality, functionality and speed. EnvisionTEC's intellectual property includes more than 140 pending and granted patents. Learn more at EnvisionTEC.com.

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