



Press Release

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Partnership yields innovative solutions for injection mold tooling, prototyping and low volume production

Henkel and Fortify join forces to enable high-performance applications in 3D printing

Düsseldorf – Henkel and Fortify recently initiated a development agreement which allows both companies to mutually combine their areas of expertise and further drive the potential of additive manufacturing. Henkel has developed custom technology that enables durable, high temperature and high modulus resins. Through collaboration, Henkel has designed several formulations that allow Fortify to achieve new outcomes for industrial customers.

“This is a benchmark for the types of collaborations Henkel strives to cultivate,” says Ken Kisner, Innovation Lead for 3D printing at Henkel and founder of Molecule Corp., which was acquired by Henkel earlier this year. “Our strong, data-driven approach to material innovation continues to unlock the power of additive manufacturing. Fortify is focused on delivering value in industries where part performance is mission critical. Together we’re making it happen.”

The combined solution leverages Fortify’s Digital Composite Manufacturing (DCM) 3D printing technology, which mixes reinforcing fibers with Henkel’s resins, and then utilizes magnetics to align the fibers for optimum strength in printed parts.

“The Fortify platform enables our customers to leverage materials that weren’t conceivable, yet alone practical on other platforms,” says Joshua Martin, CEO and Co-Founder at Fortify. “With Henkel’s assistance, we are pushing this technology forward and solving the customer problems we expected as well as discovering exciting new opportunities.”

With industrial applications, the use of fiber-reinforced polymers continues to accelerate. Injection molded parts that are reinforced with fibers typically show 20 to 100% increases in strength, stiffness and heat deflection temperature (HDT.) Fortify



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brings these same performance advantages to the 3D printing space in a variety of use cases.

Injection mold tools as one major focus area

3D printed injection mold tools are one application where Fortify is focusing in its partnership with Henkel. By replacing traditional metal tooling with inserts that are 3D printed, molders can cut weeks or months out of their schedules while saving a significant amount of costs. While this application has been pursued by others, the step change in performance from reinforced material is the key to success in demanding applications.

“When prototyping or producing parts in small runs, tooling cost and time are major barriers,” says Karlos Delos Reyes, Vice President of Applications and Co-Founder at Fortify. “With our 3D printed molds that utilize Henkel’s resin, we have proved the viability of these tools for low production runs. As we help injection molders reduce the expense and time involved with producing molds, they can quickly react to new opportunities.”

Leveraging Henkel’s material, Fortify will begin field beta testing its 3D printers in the spring of 2020. Beyond injection molding, Henkel and Fortify are looking at several end use part applications where their combined solutions offer a significant advantage.

“We’re excited about the benefits Fortify’s technology can offer our industrial customers,” adds Ken Kisner. “As new applications are unearthed, our development team is working quickly to help qualify and validate them. We have a wide range of materials in our portfolio and we’re committed to leveraging our knowledge and technology, in partnership with customers and companies like Fortify, to accelerate the growth of additive manufacturing.”

Injection molders can evaluate this exciting new technology for their business purposes by emailing to sales@3DFortify.com.

To learn more about Henkel’s innovation in 3D printing visit Loctite3DP.com. To see how your organization can collaborate with Henkel, please email us at Loctite3DP@henkel.com.

About Henkel

Henkel operates globally with a well-balanced and diversified portfolio. The company holds leading positions with its three business units in both industrial and consumer businesses thanks to strong brands, innovations and technologies. Henkel Adhesive Technologies is the global leader in the adhesives market – across all industry segments worldwide. In its Laundry & Home Care and Beauty Care businesses, Henkel holds leading positions in many markets and categories around the world. Founded in 1876, Henkel looks back on more than 140 years of success. In 2018, Henkel reported sales of around 20 billion euros and adjusted operating profit of around 3.5 billion euros. Henkel employs around 53,000 people globally – a passionate and highly diverse team, united by a strong company culture, a common purpose to create sustainable value, and shared values. As a recognized leader in sustainability, Henkel holds top positions in many international indices and rankings. Henkel's preferred shares are listed in the German stock index DAX. For more information, please visit www.henkel.com.

About Fortify

Fortify is transforming the 3D printing industry with its patented DCM platform, which delivers new levels of part performance by introducing aligned reinforcing fibers. This additive manufacturing technology combines magnetics and DLP (digital light processing) to produce custom microstructures in high-resolution, 3D printed composite parts. The company's application focus ranges from injection mold tooling to high-performance end use parts. Fortify's Boston-based team's mission is to provide engineers with tools to design and fabricate parts that are as elegant on the inside as they are on the outside. Fortify delivers faster lead times, lower costs, and superior materials compared to traditional manufacturing processes. For more information visit www.3DFortify.com.

Photo material is available at <http://www.henkel.com/press>

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A 3D printed tool by Fortify which is used to mold an automotive part