



## Press Release

November 23, 2020

Combination of EnvisionTEC 3D printers and Henkel photopolymers drives next level of additive manufacturing in industrial production

### **EnvisionTEC and Henkel to combine 3D printing and photopolymer material chemistry expertise for end-use parts**

Düsseldorf, Germany, and Dearborn, Michigan, USA – EnvisionTEC and Henkel today have announced an expansion of their partnership agreement to further drive the adoption of production level 3D Printing. Over the past two years the companies already have collaborated on a variety of unique applications. With the launch of EnvisionTEC's next generation Xtreme DLP and Envision One cDLM HT printer technologies and the expansion of Henkel's industrial grade materials portfolio the companies are well-positioned to support the volume production of end-use parts.

Both companies have already engaged in printing parts for the medical and industrial sectors. Henkel's new materials are designed to create a shift in photopolymer material chemistry and to deliver FDM functionality with the surface finish and accuracy of SLA/DLP using EnvisionTEC's high-speed production systems. Together, the partners aim to tap into the huge potential to leverage this novel material know-how in accelerating the adoption of DLP technology in the industrial production. The combination of Henkel's material expertise and EnvisionTEC's printer technology enables the creation of parts that are stable over time without losing mechanical properties, becoming brittle over time, or changing color while maintaining accuracy and surface finish.

EnvisionTEC's patented continuous Digital Light Manufacturing (cDLM) High Temperature (HT) technology platform will be included to Henkel's broad 3D printing ecosystem to leverage the company's customer base across more than 800 industry segments. Further, the partners will also collaborate for Loctite branded formulations validated for use on the Xtreme DLP Machine. This new large format 3D printer allows for the production of large 3D parts, built at fast speeds without sacrificing surface quality and part accuracy.

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To kickstart the launch of this partnership, Henkel's Loctite-branded photopolymer materials have been validated on EnvisionTEC's continuous Digital Light Manufacturing (cDLM) High Temperature (HT) technology platform and XtremeDLP printer:

- Loctite 3D 3955 HDT280 FST is a key halogen free material offering flame retardant properties with extremely high HDT (heat deflection temperature). This material is the first 3D photopolymer that passes vertical burn and aerospace FST standards.
- Loctite 3D IND406 HDT100 High Elongation is a tough material with good dimensional stability and is ideal for tooling, interior and machinery parts. This material can be used for final parts production in automotive, consumer goods and general manufacturing.
- Loctite 3D 3843 HDT60 High Toughness is a high impact resin with excellent surface finish ideal for durable parts production, tooling and low temperature molding applications across industries.
- Loctite 3D IND402 A70 High Rebound is a high rebound elastomer which does not require thermal post processing and is ideal for lattice structures as in midsoles/soft inserts.

DLP technology, originally invented and commercialized by EnvisionTEC, can now progress to the next level of industrial production of end use parts with EnvisionTEC printers on a larger scale with Henkel's photopolymer materials.

"We are thrilled to expand our partnership with EnvisionTEC and their innovative cDLM technology," stated Dr. Simon Mawson, Senior Vice President and Global Head of 3D Printing at Henkel. "EnvisionTEC's new E1 High Temp printer allows Henkel to move beyond the boundaries of viscosity limitations by enabling highly viscous or solid resins, such as Loctite 3955 FST, the first 3D photopolymer that passes vertical burn and aerospace FST standards and Loctite IND402, a single component elastomer material with high resilience and tensile strength, to be heated and printed under controlled conditions. These new generation Loctite materials combined with EnvisionTEC E1 High Temp printers will accelerate the adoption of industrial additive manufacturing."

"For 19 years EnvisionTEC has focused on delivering not just equipment or materials, but true solutions," stated Al Siblani, EnvisionTEC CEO, "We are pleased that our hard work and collaboration with Henkel over the past two years has resulted in the ability to now offer

practical solutions to high-volume manufacturing applications that will disrupt traditional processes while offering a solid return on investment.”

To learn more about EnvisionTEC’s 3D printing solutions, visit [EnvisionTEC.com](https://envisiontec.com). To contact EnvisionTEC directly regarding their solutions and other collaborations, please email [northamerica@envisiontec.com](mailto:northamerica@envisiontec.com).

To learn more about Henkel’s innovation in 3D printing visit [LoctiteAM.com](https://loctiteam.com). To see how your organization can collaborate with Henkel, please email [Loctite3DP@henkel.com](mailto: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 2019, Henkel reported sales of more than 20 billion euros and adjusted operating profit of more than 3.2 billion euros. Henkel employs more than 52,000 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](https://www.henkel.com).

### **About EnvisionTEC**

EnvisionTEC is a leading global provider of professional-grade 3D printing solutions. Founded in 2002 with its pioneering commercial DLP printing technology, EnvisionTEC now sells more than 40 printer configurations 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 precision, surface quality, functionality and speed. For more information, please visit <https://envisiontec.com>.

Photo material is available at [www.henkel.com/press](https://www.henkel.com/press)

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EnvisionTEC and Henkel combine their expertise to drive the adoption of production level 3D Printing.