Press Release

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Extended partnership to accelerate the adoption of additive manufacturing and functional materials for industrial applications

Henkel and Nexa3D sign material development agreement for next-generation functional polymer

Düsseldorf, Germany, and Ventura, California – Henkel and Nexa3D, the maker of ultrafast polymer 3D printers, today announced the signing of a new material development agreement. This agreement builds upon the companies' partnership and deepens their joint commitment to advancing the capabilities of additive manufacturing (AM) for volume production. The two companies plan to develop next-generation functional polymers that leverage their combined technologies specifically targeting volume production opportunities in industrial casting, footwear, medical, and consumer goods industries.

As part of the expanding partnership, Henkel and Nexa3D are developing a new casting material designed for industrial metal castings suitable for applications such as automotive, robotics, heavy machinery, and hydraulics. Manufacturers can use the material to produce complex geometries to reduce weight and consolidate parts, resulting in affordable lightweight parts at high production volumes. The new class of functional material is fully optimized for ultrafast 3D printing workflows. Use of advanced design for additive manufacturing tools will further optimize results possible with the material, enabling reductions in material and energy consumption as well as final part weights and costs.

The combination of Nexa3D's ultrafast additive production platform and Henkel's development of a new generation of casting material can digitize the casting workflow of foundries looking to upgrade from traditional wax tooling to AM. This development delivers all the benefits of traditional metal AM, at much higher productivity using supply chain approved metals without compromising on quality.

Traditional manufacturing methods, such as using wax patterns, commonly require expensive tooling and refrigerated transport to maintain their shape during transport. This new casting material produces thermally stable patterns, eliminating the need for refrigerated containers or bespoke tooling for each design. The parts are also more sustainable, compared to traditional stereolithography processes, because they use fresh resin, rather than resin from a large vat that requires constant energy to maintain.

"In order to accelerate the adoption of additive manufacturing, we recognize that materials need to be customized for a given printer platform to meet the specific needs of the end user," says Simon Mawson, Senior Vice President and Global Head of 3D Printing and Incubator Businesses at Henkel. "By entering into a formal material development agreement with Nexa3D, we can now leverage the power of Albert, our highly agile, proprietary, digital innovation platform, to unlock the full potential of the Loctite photopolymers portfolio and Nexa3D's ultrafast additive production platform."

"We have found that fewer than five percent of the more than 45,000 foundries globally currently use 3D printing, with adoption typically constrained by technology being either too slow or too expensive," explained Kevin McAlea, COO of Nexa3D. "Compared to traditional stereolithography printers, the combination of this new material and our ultrafast technology offers 20X productivity and produces far more robust parts. Foundries and patternmakers now have access to a complete digital workflow that enables them to speed up production and post-processing to develop patterns faster."

"Our extended partnership with Henkel also allows us to deliver new additive solutions to the market at a time when traditional supply chains are stretched and brittle. We're not simply suggesting existing materials to customers — we are tailoring the material solution to suit our customers' applications. For example, we are currently collaborating with Henkel on a new generation of ultrafast functional materials that improve modelling cycle time by orders of magnitude capabilities," continued McAlea.

Henkel and Nexa3D have an established partnership that this year has already resulted in the introduction of a new class of medical device as well as a dedicated center for AM advancement. The 3D printed SKOP telemedicine stethoscope was created using biomimicry design concepts, color-matched materials, and complex geometries only possible via 3D printing. The SKOP arose from a collaboration among Nexa3D's technology, Henkel's materials, contract manufacturing from Third, and healthcare company WeMed. Nexa3D and Henkel further launched the NEXT*FACTORY* in Ventura, California this year as a full-scale AM customer center. The center offers customers access to integrated post-processing

technologies, material formulation customization, color matching, and a variety of finishing options.

Following the launch of the new casting material, Henkel and Nexa3D will work toward further targeted formulations. Applications in healthcare, footwear manufacture, and consumer goods, for example, offer ample opportunity for next-generation functional materials and ultrafast 3D printing production capabilities.

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

Nexa3D is continuously developing ultrafast 3D printing methods and materials with its joint developments and partnerships. To learn more about how you can access this powerful collaboration for your additive production project visit nexa3d.com To learn more, check out this media kit. For more information on Nexa3D and its products, visit www.nexa3d.com like on Facebook, or follow on Instagram, Twitter, and LinkedIn.

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 2020, Henkel reported sales of more than 19 billion euros and adjusted operating profit of about 2.6 billion euros. Henkel employs about 53,000 people globally – a passionate and highly diverse team, united by a strong company culture 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 Nexa3D

Nexa3D is passionate about digitizing supply chain sustainably. The company makes ultrafast polymer 3D printers, that deliver 20X productivity advantage, affordable for professionals and businesses of all sizes. The company partners with world-class material suppliers to unlock the full potential of additively manufactured polymers for volume production. The company makes automated software tools that optimize the entire production cycle using process interplay algorithms that ensure part performance and production consistency, while reducing waste, energy, and carbon footprints. For more information, please visit www.nexa3d.com.

Photo material is available at www.henkel.com/press

Contacts	Henkel	Nexa3D
	Sebastian Hinz	Leah Elston-Thompson
Phone	+49 211 797 - 8594	+44 (0) 1785 225 416
Email	sebastian.hinz@henkel.com	leah@stonejunction.co.uk / nexa3d@stonejunction.co.uk

Henkel AG & Co. KGaA

Next-generation polymers from Henkel and Nexa3D for industrial production: rear swing arm casting aluminum with 3D Printing pattern for Acimoto.

Nexa3D this year has opened its first full-scale additive manufacturing customer center NEXTFACTORY in partnership with Henkel.

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