

Press Release

January 27, 2021

Flame retardant 3D Printing material Loctite 3955 from Henkel now validated for Asiga printers

Asiga and Henkel drive additive manufacturing solutions for industrial production

Düsseldorf, Germany – Asiga, an industry leading manufacturer of 3D printing equipment, is partnering in Henkel's Open Materials Platform to accelerate the adoption of additive manufacturing in various industries with production-grade 3D printed parts that are both accurate and functional. Henkel offers a broad portfolio of high-performance photopolymers for the 3D printing industry. The company develops and provides a wide range of photo-curing resins that enable ultra-fast manufacturing of production parts with many different properties, from high-impact to highly flexible, in addition to those with high heat resistance and others for specialty applications.

Asiga was an early innovator in desktop stereolithography, launching the world's first LED based DLP 3D printer in 2011. Today the company continues to focus on a range of process monitoring technologies which control part accuracy and production stability across many industries including medical and general manufacturing. Asiga's product line consists of powerful desktop 3D printers with their MAX series through to their large format floor standing PRO 4K.

Since the <u>announcement</u> of their collaboration in July 2020, Asiga and Henkel have been collaborating to validate industrial grade materials by optimizing print processes that push the threshold of additive manufacturing capabilities. Working together, the two companies have been leveraging their deep experience in chemistry and 3D printing technologies to drive the next level in additive manufacturing production. "Henkel continues to unlock applications with an innovative approach to material development providing Asiga customers access to the next generation of 3D printing materials," says Graham Turner, Global Operations Manager at Asiga.

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"After many months of collaboration working with the Asiga technical team we are pleased to announce further additions of the Loctite industrial resins for the Asiga platform. The new Asiga Pro4K is an exciting entry into the industrial 3D space, and we are pleased that Asiga has partnered with Henkel to bring many of our newest technologies to that platform including our 3955 FST material," explains Sam Bail, Head of OEM Partnerships for 3D Printing at Henkel.

To ensure the production of functional, repeatable, and reliable parts, Loctite materials are qualified with an industrial workflow. Loctite 3D 3955, a 3D printable photopolymer material with fire, smoke and toxicity resistance properties with heat deflection temperatures greater than 300 degrees centigrade has been validated for the Asiga Max and Asiga Pro4K printers. The material meets the fire, smoke and toxicity safety standard UL 94V-0 and the industry leading aerospace 12 and 60 second vertical burn tests and applicable for many industries, including aerospace, automotive and transportation.

Asiga's Germany-based reseller in Litholabs has been working with ERNI, a Switzerland based electronics connector manufacturer on the functional prototyping of connectors with 3D printed backshell for printed circuit boards with Henkel Loctite 3955 FST material. The high accuracy printing on the Asiga devices with Loctite 3955 enables better design of fine detailed parts. Printing the connectors with the 3D material also allow the prototyping of the PCB assembly along with the electronic components. Loctite 3955 printed connectors can withstand the high temperatures associated with surface mount technology-based wave soldering systems. ERNI can now rapidly test assembled PCB systems to get optimum designs and customer approvals faster compared to the traditional way of developing injection mold metal tools.

"As a reseller of Asiga 3D printers, we acquire a lot of experiences working with customers from various industrial backgrounds," says Axel Schwan, Founder of Litholabs. "The innovative Loctite 3955 resin from Henkel arrived timely to meet the demand for highly functional and technical 3D Printing solutions. Together with the completely open material platform from Asiga, they forge a conducive ecosystem for efficient, agile and reliable manufacturing in the industrial sector."

"Henkel's 3955 material saves us significant time and investment costs that would normally have to be made on injection molded processes," adds Stefan Molitor, Design Engineer at ERNI. "We are the gateway of discovering new opportunities with this material and processes. For us, it begins with the open possibilities of additive manufacturing from rapid prototyping to rapid manufacturing in the future." As every application has its own needs, Asiga and Henkel aim to support the individual journey towards additive manufacturing at industrial scale. Together, the partners can support customers to operate in a broad range of applications ranging from prototyping to large scale production and meet their specific application requirements. To help assisting customers in their next digital manufacturing initiative, visit www.Asiga.com or one of its authorized resellers, including German-based <u>Litholabs</u>. To learn more about Henkel's innovation in 3D printing visit <u>LoctiteAM.com</u>. To see how your organization can collaborate with Henkel, please email <u>Loctite3DP@henkel.com</u>.

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 <u>www.henkel.com</u>.

About Asiga

In 2011, Asiga launched the world's first LED based DLP 3D printer and started the affordable desktop stereolithography revolution which changed digital manufacturing forever. Asiga gained international recognition for the innovations contained within their precise and repeatable 3D printers. These technologies continue to lead their respective categories to this day. Asiga designs and manufactures all products at their headquarters in Sydney, Australia. For more information and a list of Asiga resellers, please visit <u>asiga.com</u>.

About Litholabs

Since 2017, LithoLabs offers expertise in additive manufacturing with Digital Light Processing (DLP) 3D printing for customers from various sectors and sizes. Our principle is to advise and support our customers in a holistic approach; from pre-sales consulting, finding the right materials and tools, through the entire digital workflow, to the quality and security of your workflow. For all your digital production tasks, LithoLabs is the partner you can rely on to tackle the challenges. Our goal is your mission accomplished! For more Information please visit: litholabs.com.

About ERNI

ERNI is an international, family-owned company of swiss origin, with more than 70 years' experience as a leading global manufacturer and service provider. Today, ERNI International AG, the headquarter located in Switzerland, has over 1,300 employees globally. ERNI develops and manufactures a wide variety of electronic connectivity solutions for various areas of applications. An emphasis is on connectors for the automotive area and industrial automation that function reliably under extreme conditions. Furthermore, ERNI supplies other industries with high quality connector solutions, cable assemblies, cable enclosures and more. https://www.erni.com/en/

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

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Henkel AG & Co. KGaA



Asiga and Henkel collaborate to drive additive manufacturing solutions for industrial production by validating Henkel materials for the open platform of Asiga



Litholabs and ERNI worked together for the prototyping of connectors with 3D printed backshell for printed circuit boards with Henkel Loctite 3955 FST material