

Press Release

September 7, 2021

Forward AM Announces First TÜV Rheinland Certified Additive Manufacturing Process for Food Contact

- » **First 3D printing process in accordance with Good Manufacturing Practice (GMP) certified by TÜV Rheinland**
- » **TÜV certification enables Forward AM to produce 3D printed parts for food contact**
- » **Initiated by joint project with Replique and Miele**

Forward AM, the brand of BASF 3D Printing Solutions, announces the first TÜV certification of a 3D printing process for the manufacturing of end parts for food contact. Since September 2021, the manufacturing process is officially approved and certified by TÜV Rheinland.

In industrial manufacturing, the production of parts intended for food contact is obliged to meet the highest demands to protect human health. To be able to produce end parts approved for food contact use, the entire manufacturing process must be considered – from material production, through the 3D printing process, to the final end part and its packaging. Certification by TÜV Rheinland now officially confirms the strict product quality control and outstanding process reliability of food-industry 3D printing for the first time.

“With TÜV Rheinland certification we are closing a critical gap in the Additive Manufacturing of parts intended for food contact. This holistic solution means we are now able to offer our customers the production of officially safe food-contact parts”, explains Christian Reinhardt, Business Development Manager, BASF 3D Printing Solutions. “The TÜV certification proves that 3D printing has matured as a manufacturing technology and is now able to produce highest-standard end parts in a fully controlled and audited process. What’s more, this certification confirms Forward AM’s aspiration to become the food industry’s leading consultancy and supplier for the manufacture of 3D printed food-contact parts.”

The safety of food contact materials needs to be very strictly evaluated to ensure that chemicals do not migrate from materials into food.

The materials must be manufactured in full compliance with EU regulations, including Good Manufacturing Practice, so that any potential transfer does not raise food safety concerns, impact the desired composition of the food, or have adverse effects on its taste and odor. To comply with these requirements, special processes and measurements were implemented in Forward AM’s filament production to avoid any risk of cross contamination. Parts printed with the filament Ultrafuse® PET were tested accordingly to LFGB and Regulation (EC) No. 1935/2004 and met the requirements for food contact.

TÜV certification of the manufacturing process was initiated by a joint project with Replique and their customer Miele, the German premium domestic appliance manufacturer. Within the project 3D4U, Miele provides customers with 3D printed accessories through its online shop, including food contact parts starting with a coffee clip. The fulfilment of 3D printed parts ordered in the Miele online shop is orchestrated by the integrated platform of Replique, startup of Chemovator GmbH, BASF. Realized with latest-generation desktop 3D printers by BCN3D, a leading Spanish developer and manufacturer of 3D printing solutions, food contact-safe products are produced at TÜV-certified quality, ensuring complete ease of mind for the end customer.



Image: The manufacturing of 3D printed parts for food contact is now certified by TÜV Rheinland (Source: BCN3D).

About BASF 3D Printing Solutions

BASF 3D Printing Solutions GmbH, headquartered in Heidelberg, Germany, is a 100% subsidiary of BASF New Business GmbH. It focuses on establishing and expanding the business under the Forward AM brand with advanced materials, system solutions, components and services in the field of 3D printing. BASF 3D Printing Solutions is organized into startup-like structures to serve customers in the dynamic 3D printing market. It cooperates closely with the global research platforms and application technologies of various departments at BASF as well as with research institutes, universities, startups, and industrial partners. Customers are primarily companies that intend to use 3D printing for industrial manufacturing in the automotive, aerospace, and consumer goods sectors. For further information please visit: www.forward-am.com.

About Chemovator

The Chemovator GmbH is the incubator of BASF, available for all BASF employees with innovative business ideas. Complementary to the existing innovation landscape of BASF, the Chemovator offers a protected environment to accelerate speed to market for new products, digital business models or comprehensive all-round solutions – significant is the reference to chemistry.

The wholly-owned subsidiary of BASF New Business GmbH is located in Mannheim. Here the Chemovator offers an unconventional start-up environment with plenty of space for creativity. From early orientation phase to successful commercialization the venture teams get supported by experienced entrepreneurs and investors, who have built start-ups and new businesses from scratch. Their support ranks from coaching over mentoring to providing extended network opportunities.

About Replique

Replique was formed by experts in the field of material science and digitalization at BASF. The team had the vision of digitizing spare parts and producing them on demand so that they can be available anytime and anywhere. To further develop this idea the team joined Chemovator GmbH, the internal incubator program of BASF, in the beginning of 2020.

Replique offers an industrial 3D printing platform that enables OEMs to provide parts on-demand to their customers through a global, decentralized and secured 3D printing network. As a turnkey provider Replique offers end-to-end support to customers including design, technology and material selection, warehousing and integration to the supply chain.

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. More than 110,000 employees in the BASF Group contribute to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio is organized into six segments: Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions. BASF generated sales of €59 billion in 2020. BASF shares are traded on the stock exchange in Frankfurt (BAS) and as American Depositary Receipts (BASFY) in the U.S. Further information at www.basf.com