Sustainability statement | Ultrafuse® filament products

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Dear valued customer,

At BASF 3D Printing Solutions we are deeply committed to sustainability. We're continuously working to reduce the environmental impact of our Forward AM products and minimize our use of Earth's precious resources. To accelerate and justify our efforts, we recently conducted a detailed SEEbalance assessment for 3D printing technologies. We've evaluated the results over the past few months and are now incorporating them to make our Ultrafuse products even more sustainable. This statement intends to inform you about the steps we have taken already in our ongoing sustainability journey.

- **Sustainable filament materials since 2012**. Since the beginning of our filament materials, sustainability has been an important topic on our agenda. To have a broader and greener Ultrafuse® filament portfolio, we have bio-based Ultrafuse® PLA, Ultrafuse® PLA PRO1, Ultrafuse® PLA Tough and Ultrafuse® rPET (recycled PETG). The PLA material has been on the market since 2012, with the rPET following two years later.

- **A greener future for Ultrafuse® Filament products by utilizing renewables;** effective from 01.01.2022. Besides continuous manufacturing optimizations to produce products with less resources we are excited to announce that we have moved from fossil-based energy to Dutch wind energy at the production site in Emmen, The Netherlands. This change to renewable energy sources led to a reduction in our footprint and your product footprint.

- **Ultrafuse spools are made with recycled raw materials;** effective from 01.09.2021. All our Ultrafuse spools are based on **90 – 100% recycled raw material**. The material is based on either one or both, post-consumer and post-production resources. This statement is in reference to the **NEN-EN-ISO 14021**.

  To ensure the high-quality standards of the filament spools, additives which are also used in spools made with virgin plastic, are added in incredibly low amounts. During the vendors upstream compounding process, it could be needed to add e.g., impact modification additives or color additives.

- **Ultrafuse retail box, is coming with a Forest Stewardship Council® label;** effective from Q4 2022. The Ultrafuse cardboard box which protect our product is credible forest certified. The Forest Stewardship Council® (FSC®) helps take care of forests and the people and wildlife who call them home. What does the label mean? Simply put, by choosing products with FSC labels, you are contributing to the protection of forests worldwide. Each label provides information about the origin of the materials used to make the retail box.

- **Ultrafuse retail box - more efficient high quality level secure product;** effective from Q2 2023. This optimization will enable BASF Forward AM to continue to meet its mission to reduce the environmental impact and supply high quality filaments which have been specially developed for FFF printing. This new optimization has been developed with the upmost care and has gone through our extensive test validation protocol to ensure both the quality and performance you have come accustomed to while reducing the carbon footprint of Ultrafuse® products. Reduced an average of 40.65% of the retail box packaging material resulting in weight reduction and the ability to stack more shipping boxes on a fully loaded pallet when compared to the previous setup. This allows you to optimize your warehouse space, as more products can be shipped and stored on one pallet.

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- **Eliminating Ultrafuse paper leaflets;** effective from Q2 2023. Digitalization steps allow us to eliminate the physical paper product information leaflet that used to be part of an Ultrafuse product. The leaflet has been replaced by product QR-codes that is one easy single point of contact to gain clustered specific product information.

- **Recycled Content Declaration Form**; available from Q2 2023. This Recycled Content Declaration Form aims to provide a clear and transparent information about the material composition and recycled content and is available for our Ultrafuse® rPET.

- **Peer reviewed Life Cycle Assessment (LCA);** available from Q4 2023 for our Ultrafuse® PLA, ABS, PET and rPET products and can be requested by the following form. The LCA is a process that evaluates and quantifies the effect that a product has on the various environmental impact categories, such as climate change, land use, water use, ocean acidification. A peer review is important as it acts as a filter, ensuring that the research is properly verified by independent experts in the field before being published. An infographic that shows the results of the footprint reduction of Ultrafuse® rPET footprint is presented Figure 1.

- **Introducing phase Alpha of our more eco-friendly product configuration;** available from Q2 2024. We have streamlined packaging by eliminating redundant packaging materials. For Ultrafuse® PLA, PLA Tough and PRO1 the silica gels are removed from the product as they are rather tolerant to moisture. Additionally, redundant plastics foils without functional purpose are eliminated from the 2-2.5 and 4-4.5kg products. These modifications contribute to a more environmentally friendly product configuration by reducing disposal waste and unnecessary packaging materials.

- **What is next?** Currently, we are working on expending the Life Cycle Assessment (LCA) for our other Ultrafuse portfolio products and we are working on our next optimization in our product packaging.

We're proud to say that our products are not only top-quality, but now also environmentally friendly. With our sustainable approach, you can trust that you're making a responsible choice for the planet when you choose Ultrafuse® Filaments. Join us in our mission to create a better future for all.

Further information can be accessed on our Forward AM website. Specific information regarding sustainability can be found by clicking on the following link: click here.

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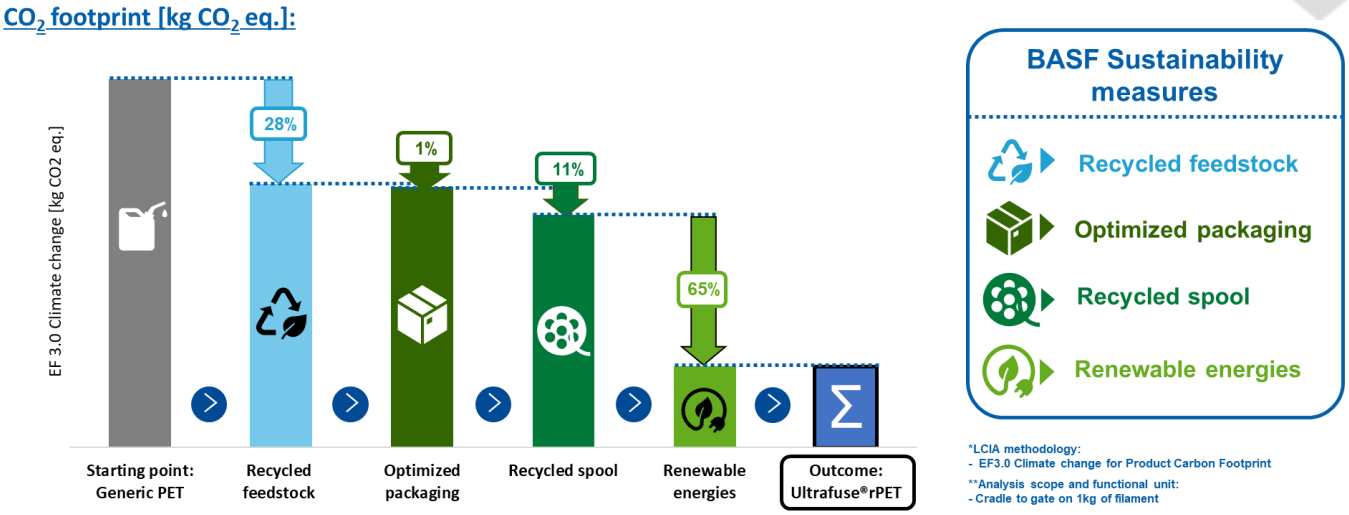

*Figure 1 The evolution of Ultrafuse® rPET that resulted in **78%** lower CO2 footprint compared to generic PET filament. The evolution: a change from virgin PET to recycled feedstock, reduction of the packaging materials, alter from virgin to spools that are made with >90% recycled raw materials, filament production plant switched to renewable energies sources.*

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This document expires upon any regulatory change. Please request new confirmation if needed.

We give no warranties, expressed or implied, concerning the suitability of above-mentioned product(s) for use in any device and applications. The data contained in this publication are based on our current knowledge and experience. Product Sustainability information is applicable for Ultrafuse products produced within the European Union.

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