

News Release

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Go!Create - from scrap tire to door handle: Pyrolysis oil and biomethane enable production of mass-balanced plastics

- **BASF, Mercedes-Benz, Pyrum Innovations AG and WITTE Automotive are closing the material cycle by replacing fossil raw materials according to the mass balance approach**
- **Implementation in various Mercedes-Benz series models: Use of pyrolysis oil and biomethane in mass-balanced plastics to produce automotive components**
- **Development partners present example of Plastics Journey at K 2022 trade fair**

Ludwigshafen, Germany – October 12, 2022 – BASF, Mercedes-Benz, Pyrum Innovations AG and WITTE Automotive successfully closed a material cycle to produce automotive components from mass-balanced plastics. Pyrolysis oil from scrap tires and biomethane from organic waste can replace fossil raw materials in manufacturing plastics with virgin material properties.

Bow door handle made from mass-balanced Ultramid® will start series production this year

To produce the plastic for the bow door handle for selected Mercedes-Benz models, BASF combined alternative raw materials in a mass balance approach: pyrolysis oil generated at Pyrum Innovations AG from scrap tires and biomethane from agricultural waste and food industry residues. The resulting plastic, in this case, the Ultramid® polyamide 6 with 30 percent glass fiber reinforcement, features the same properties as prime quality plastic making it the ideal material for demanding vehicle

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components.

In line with an efficient circular economy, mass-balanced products will be used for bow door handles for the Mercedes-Benz S-Class and the EQE this year. “Solutions like these help our customers meet their sustainability goals,” explains Dr. Martin Jung, President of Performance Materials, BASF. “This is our Go!Create approach: we invite all our customers and partners to join us in shaping the path towards a circular economy with plastics. With this bow door handle for Mercedes-Benz, we have shown this in an exemplary way.”

An independent certification following the REDcert² scheme, verifies the quantities of pyrolysis oil and biomethane required to replace fossil raw materials for the end product. These certified raw materials are fed into BASF’s production network, are mathematically assigned to the plastics through the mass-balance approach and then delivered to the BASF customer WITTE Automotive. The subsequent production of the bow door handles at the automotive supplier is audited externally in the same way based on the REDcert² standard.

In addition, the jointly developed solution approach will be transferred to a crash absorber for the Mercedes-Benz S-Class. As component of the vehicle’s front end, the crash absorber contributes to an even reduction of forces acting on the other car in a frontal collision. In this case, again, a mass-balanced plastic compound based on pyrolysis oil and biomethane from BASF meets the high-quality requirements of Mercedes-Benz, particularly regarding crash safety.

From plastic waste to new products

By improving the production, use and recycling of plastics, the companies involved are one step closer to their sustainability goals. The project partners were recognized for the jointly developed solution as winners of the 2022 MATERIALICA Design + Technology Awards in the category Material in Berlin on October 5, 2022. The judges highlighted the collaborative approach along the value chain as essential for addressing the topic of sustainability.

BASF focuses on the circular economy

The BASF ChemCycling™ project targets plastic waste that is not recycled mechanically for technological, economic or ecological reasons. Together, mechanical and chemical recycling can increase recycling rates and contribute to a

stronger circular economy for plastics. Both recycled and bio-based raw materials can replace fossil resources in production and help save CO₂ emissions. Using a mass-balance approach audited by an independent third party, the proportion of recycled and/or biobased raw materials is allocated to products manufactured in the Verbund. These products are independently certified and have the same properties as those based on fossil resources. Customers can process and use them in the same way for demanding applications.

BASF presents solutions for a sustainable plastics industry at K 2022 trade fair

The partnership approach will be presented at an expert talk with exhibits about this developmental approach at K 2022 in Düsseldorf. Interactive touchscreen applications will show the complete materials cycle and potential savings. At K 2022, BASF will present its journey towards a more sustainable plastics industry with the motto “Go!Create - welcome to #ourplasticsjourney.” This Plastics Journey consists of three phases representing plastics’ life cycle: MAKE, USE and RECYCLE. At the trade show, BASF invites all customers and partners to join the journey and work together to improve the production, use and recycling of plastics.

Further information on BASF's mass balance approach can be found [here](#).

Further information on the use of sustainable materials at Mercedes-Benz can be found [here](#).

You can find more information about Pyrum Innovations AG [here](#).

You can find more information about WITTE Automotive [here](#).

BASF at K 2022: Welcome to #ourplasticsjourney!

Go!Create! At K 2022, we invite everyone to join #ourplasticsjourney! At our booth in hall 5, C21/D21, we will explore new ways in which sustainable action is possible in all phases of the lifecycle of plastics: from how we can produce plastics more sustainably, to how we can use them better, to how we can discover new solutions to close the loop. Solving these challenges is a journey that we are all on together. At K 2022, we want to make that journey go faster. K is the #1 trade fair for plastics and rubber and will take place in Düsseldorf, Germany, from October 19 – 26, 2022. Visit www.plastics.basf.com/K2022.

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. Around 111,000 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 comprises six segments: Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions. BASF generated sales of €78.6 billion in 2021. 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.