

# News Release

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## **Towards more sustainability and efficiency: Join #ourplasticsjourney at Fakuma 2024**

- **Focus on sustainable plastic solutions for customers and partners**
- **New products and services to be introduced at Fakuma 2024**

The transformation has only just begun – now it is time to embark at #ourplasticsjourney and make the lifecycle of plastics more sustainable. Latest developments will be shown at Fakuma from 15 to 19 October 2024 in Friedrichshafen, Germany: Hall B4, booth B4-4303.

### **Siemens and BASF present a ground-breaking circuit-breaker with components made from biomass-balanced plastics**

Siemens Smart Infrastructure and BASF are taking an important step towards a circular economy with the SIRIUS 3RV2 circuit-breaker, the first electrical safety product to contain components made from biomass-balanced plastics.

In the production of the circuit breaker, fossil resources are being replaced by biomethane obtained from agricultural waste. Featuring the same quality and performance as conventional plastics, BASF's Ultramid® BMBcert™ and Ultradur® BMBcert™ are the plastics used. This innovative approach is part of BASF's biomass balance approach, which boosts the use of renewable raw materials in the BASF network and can be applied to the company's extensive product portfolio.

In addition, the SIRIUS 3RV2 circuit-breaker meets the strict criteria of the recently introduced Siemens EcoTech label, which offers customers a comprehensive insight into product performance in terms of selected environmental criteria.

The circuit-breaker, whose housing and functional parts are largely made of biomass-balanced plastics, consumes less energy over its life cycle than its predecessor. The collaboration between Siemens and BASF promotes not only the circular economy, but also the use of renewable resources in contributing to a more sustainable future.

### **BASF expands TPU product portfolio for the circular economy**

Together with customers and partners BASF extends the sustainability efforts in three main areas: Developing recycling streams to reuse thermoplastic polyurethane (TPU) as a raw material, evolving on (bio-)mass balanced feedstock and using more bio-based resources.

TPU can usually be recycled in environmentally compatible ways. Using waste streams that offer post-industrial recycled material, several Elastollan® grades are now available containing 30-100% recycled TPU, called Elastollan® RC.

With the ISCC Plus certification of its production site in Lemförde, Germany, BASF again shows the commitment to support customers in achieving their sustainability goals. Three categories of the mass balance approach allow for flexible drop-in solutions combining a reduced need of fossil resources and a lower CO<sub>2</sub> footprint according to customers' requirements.

Bio-based Elastollan® TPU is made with renewable-sourced material featuring identical building blocks. The bio-based carbon content of this drop-in replacement can be measured against the ASTM D6866 standard. [www.elastollan.basf.com](http://www.elastollan.basf.com)

### **PCF app PACIFIC launched on Cofinity-X**

The app PACIFIC, a solution for the exchange of Product Carbon Footprint (PCF) data of BASF products, is now available in the app store of Cofinity-X, the Catena-X Automotive Ecosystem. BASF customers can register for the application as of now. PACIFIC is a joint development of BASF and the Berlin-based start-up CircularTree.

After three years of close collaboration within the Catena-X consortium in the sustainability sector, important milestones have been reached with the development of various standards. These include, among others, a set of PCF rules, a PCF kit and a PCF data model, to name just a few examples. The standards aim to facilitate

the exchange of PCF data within the Catena-X data ecosystem and thus specifically improve sustainability.

### **25 years of pioneering the field of CAE simulation for plastics and foams with Ultrasim®**

Designing for sustainability is an important aspect in closing the loop. One way BASF supports this is with its proprietary computer-aided engineering tool Ultrasim®, which celebrates 25 years as a pioneer in material simulation in 2024. Ultrasim® allows customers to simulate how recycled plastics will perform in applications long before manufacturing begins. [www.ultrasim.basf.com](http://www.ultrasim.basf.com)

### **At the heart of eMobility: engineering plastics for durable and powerful electric motors**

BASF's broad material offering for e-motor applications can be experienced first-hand at the BASF booth where a demonstrator of an integrated e-motor and inverter will be exhibited. For the development of efficient, durable and powerful e-motors BASF offers a unique co-creation partnership to the automotive industry: an extensive portfolio of engineering plastics is the basis for design and engineering expertise, Ultrasim® simulation and part testing. Backed by BASF's deep understanding of e-motor challenges, customers can develop next generation e-motors while at the same time meeting production targets and market expectations for sustainability and energy efficiency.

### **Choose to reduce – broad product portfolio of high-quality polyamide solutions for packaging, films, monofilaments, automotive and textile fibers**

With the Ultramid® product line, BASF offers its customers both standard and increasingly sustainable solutions for the extrusion and fiber sectors. For example, recycled raw materials are used instead of fossil raw materials in the production of Ultramid® Ccycled® and are allocated to the Ccycled® products via a certified mass balance approach. This also applies to Ultramid® Biomass Balance (BMB) products, which are manufactured using renewable raw materials.

All of these products are so-called "drop-in" solutions, which are equivalent in quality to conventional products and can be used by customers without any further changes to the manufacturing process. Wherever quality, hygiene and performance are paramount, Ultramid® from BASF is ideally suited for numerous applications.

## **High Productivity Plus Portfolio (HPP) – the bonus for cost-optimized and energy-efficient production**

Production costs are crucial in the calculation of a component's total cost. As a rule, the aim is always to achieve the lowest cost per unit. BASF has developed a new product portfolio with HPP– High Productivity Plus – grades, helping to significantly reduce cycle time and energy consumption in the production process. Initial tests with Ultradur® and Ultramid® show a potential reduction in cycle time of around 30%.

Characteristics of HPP compounds are their excellent flowability and accelerated crystallization. On this basis, it is possible to significantly reduce the required cooling times and hence cycle time. Significant cost savings can be achieved by switching to HPP compounds.

BASF currently offers the following HPP products: Ultramid® B3EG6 HPP, Ultradur® B4300G2 HPP, Ultradur® B4300G3 HPP and Ultradur® B4300G4 HPP. If required, HPP technology can also be applied to compounds with other glass-fiber contents.

## **Ultramid® Expand – the polyamide-based particle foam that sets no limits to ideas**

Ultramid® Expand is a new class of material featuring polyamide-based foam solutions for various automotive applications. This foam is distinguished by its high temperature resistance, excellent mechanical strength, and resistance to chemicals. Developed for structural applications in the automotive industry, it comes with a combination of high temperature and thermal deformation resistance as well as excellent mechanical properties.

Ultramid® Expand can be processed with standard EPP vapor-molding machines and is compatible with various thermal welding processes. The material can be used in a variety of automotive components, including occupant and battery protection, structural inserts, and battery cell holders. The foam is easy to overmold with compatible materials to create hybrid components that are recyclable while providing a mono-material solution. Thanks to its properties, the foam is suitable for use in battery environments and has excellent chemical resistance.

[www.ultramid-exand.basf.com](http://www.ultramid-exand.basf.com)

### **Ultradid® T6000 and T7000: bridging the gap between PA and PPA**

BASF shows its whole range of polyphthalamides (PPA) at the booth with a focus on the new grades Ultradid® T6000 and T7000. The high-performance Ultradid® T6000 (PA66/6T) flame retardant portfolio shows excellent RTI and GWIT values. It opens up colorful possibilities with even white color shades for miniaturization of E&E parts. Ultradid® T7000 surpasses PA66 in mechanical properties especially in presence of humidity up to a temperature of 80°C. The PA/PPA blend has a high stiffness and strength, which makes it a perfect metal replacement - plus the added value of a smooth surface finish and dimensional stability. [www.ppa.basf.com](http://www.ppa.basf.com)

### **New Elastollan® 1400 TPU series launched**

The new ether-based TPU series provides exceptional hydrolysis and microbe resistance. The material combines stable processing behavior with good compression set properties and delivers outstanding burst pressure performance. Processed by extrusion and injection molding Elastollan® 1400 is suitable for a wide range of applications. Whether it is railway pads, hoses, profiles, or shoe soles, because of its aging stability the new grades provide reliability and long-lasting performance.

### **Specialty polymer Ultrason® (PSU, PESU, PPSU) for special E&E components with a medium CTI**

Combining the unique property profile of polyarylethersulfones (PAES) with a good Comparative Tracking Index (CTI): For more design flexibility in special E&E parts, BASF now offers Ultrason® D 1010 G6 U40 with a higher CTI (PLC rating 3) compared to other high-temperature polymers like PEI and PPS. The PPSU/PPA blend shows excellent flow behavior, the superior chemical resistance typical for Ultrason® and good mechanical performance at elevated temperatures. Very good electrical properties regarding flame-retardancy, electrical insulation and RTI make the new grade an ideal material for specific requirements in E&E devices, when it comes to parts like switches, relays, connectors, IGBTs and components in e-drives. [www.ultrason.basf.com](http://www.ultrason.basf.com)

**Visit us at Fakuma 2024 Hall B4, booth B4-4303**

**About BASF**

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. Around 112,000 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 €68.9 billion in 2023. BASF shares are traded on the stock exchange in Frankfurt (BAS) and as American Depositary Receipts (BASFY) in the United States. Further information at [www.basf.com](http://www.basf.com).

**About BASF's Performance Materials division**

BASF's Performance Materials division is at the forefront of the much-needed sustainability transformation in plastics. Our products are co-created with customers around the globe to bring innovations to major industry sectors such as transportation, consumer goods, industrial applications, and construction. Our R&D focuses on all stages of the plastics journey: Make, Use and Recycle. The MAKE phase is about improving how plastics are made, from product design to the choice of raw materials and the manufacturing process itself. The USE phase enhances plastics' strengths such as light weight, robustness, and thermal resistance. At the end of the product lifecycle, the RECYCLE phase looks at how to close the loop to achieve a circular economy. In 2023, the Performance Materials division achieved global sales of €7.2 billion. Join #ourplasticsjourney at: [www.performance-materials.basf.com](http://www.performance-materials.basf.com).