

News Release

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The leading CAE simulation service Ultrasim® celebrates 25 years of pioneering virtual engineering for customers

- Launched in 1999, Ultrasim® has continuously pioneered the field of CAE simulation for plastics and foams
- Throughout its 25-year history, Ultrasim® has helped BASF customers from diverse industries develop sustainable innovations
- Today Ultrasim® users can rely on a strong global expert network and easy-to-access web services

Powered by unique and ultra-accurate simulation methods, extensive material data, and easy-to-access web services, the computer-aided engineering (CAE) competence Ultrasim® creates an unparalleled offering for BASF customers. As a pioneer in the field, BASF introduced the first integrative simulation capability for plastics in 1999, laying the foundation for what is today a strong global network of CAE simulation services. In 2024, Ultrasim® celebrates 25 years of helping customers use BASF plastics and foams to develop sustainable innovations in industries ranging from automotive to appliances, footwear, furniture, renewable energies, and more.

Pioneering CAE simulation for plastics and foams since 1999

“The late 1990s were an exciting time”, Stefan Glaser, today Vice President Simulation Engineering & Ultrasim®, recalls. He had joined BASF in 1996 to develop BASF’s integrative simulation capability and prepare its launch. “It was a completely new way of thinking. The internet opened up new possibilities, Google went live in 1998, and we at BASF already thought about connecting the data of our plastic

materials and use them to optimize our customers' products. This was truly pioneering work.”

In 1999, BASF launched its integrative simulation capability, which was soon rebranded Ultrasim®. Since then, the Ultrasim® competencies have expanded continuously: “In the last 15 years, we added at least one new simulation capability to our Ultrasim® portfolio per year to address new applications of our plastic materials”, Glaser shares. Today, Ultrasim® provides simulation services for process design (filling and foaming simulations) and mechanical design (static and crash analyses). The plastics are described with accurate material models that cover a wide range of phenomena like the dependence of the material response on strain rate, temperature, moisture content and, in particular, its processing.

25 years of helping customers develop sustainable innovations

“The track record of Ultrasim® is impressive”, acknowledges Josef R. Wunsch, Senior Vice President Research & Development Performance Materials, “Over the past 25 years, we have helped our customers from a wide range of segments to drive exciting innovations in their fields using our high performance materials – be it energy absorbers and engine mounts in cars, materials for battery packs, photovoltaic connectors, sport shoes, wheelchairs, and many more.”

Regardless of the target application, all customers enjoy valuable benefits from using BASF's simulation services: Ultrasim® helps them achieve a more sustainable part development with less waste, time, and energy. This results in lower costs and higher performance of their products. Customers can rely on the global network of Ultrasim® simulation experts who work hand-in-hand with the respective technical development colleagues at BASF to deliver optimum service tailored to the customers' specific needs.

The pioneering story of Ultrasim® continues into the future

“Ultrasim® has been a true success story – and it doesn't stop now”, shares Wunsch, “We continue to develop our offering and have recently revolutionized the field of CAE material simulation again: with our Ultrasim® Web Services making it a *real* customer experience.”

Ultrasim® has pioneered the world of web-based simulation services to seamlessly integrate BASF's material and part design knowledge with customers' in-house

development processes: The Ultrasim® Web Services offer simulation services as easy-to-access and 24/7 available web apps. The apps' interfaces are streamlined for specific industry challenges and come with integrated support, which enables cost-effective collaboration between customers and BASF simulation experts.

Find out more about the entire Ultrasim® portfolio at www.ultrasim.basf.com.

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.

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: <https://www.performance-materials.basf.com>.