

News Release

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New benchmark analysis proves high performance of BASF's battery binders

- **Benchmark analysis versus market standard was conducted by CUSTOMCELLS[®], a leading technology provider for lithium-ion batteries**
- **Licity[®] anode binders pass tests in electrochemical, mechanical performance and processability, partially outperforming the market standard**

BASF's battery binders pass tests compared to market standard and outperform it partially. These are the results of a recent in-depth benchmark analysis conducted by lithium-ion technology provider CUSTOMCELLS[®] for BASF SE. The tests in the field of processability, mechanical and electrochemical performance addressed SBR (styrene butadiene rubber) binders for anode manufacturing sold under the Licity[®] brand.

The results prove that

- all Licity binders demonstrate very good processability, thus allowing faster slurry preparation and homogeneous anode coating.
- Licity 2668 and Licity 2680 reveal superior mechanical performance against SBR reference.
- Licity binders show excellent electrochemical performance, enabling highest cycle stability and better rate capability for SiOx-containing anodes.

The detailed test results can be ordered free of charge here: www.basf.com/licity-

[battery-binders](#)

“High-performance lithium-ion batteries for electric vehicles play a key role in achieving climate neutrality. We are pleased to present our customers valid data on key performance indicators for our anode binders, helping to enhance battery capacity and production efficiency in their development projects.” explains Dr. Thorsten Habeck, Business Director Fiber Bonding Europe, Middle East & Africa, BASF SE.

BASF’s Licity product range for lithium-ion battery binders are suitable for pure graphite as well as silicon-containing anodes. They help to prevent electrode swelling, thus enabling higher battery capacities. Batteries benefit from Licity binders with increased charge cycles and reduced charging times. When being produced more sustainably based on BASF’s certified Biomass Balance Approach, these binders save fossil resources and reduce greenhouse gas emissions.

More information on Licity battery binders: www.basf.com/licity-battery-binders

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BASF’s Dispersions & Resins division

The Dispersions & Resins division of BASF develops, produces and markets a range of high-quality polymer dispersions, resins, additives and electronic materials worldwide. These raw materials are used in formulations for a number of industries, including coatings, construction, adhesives, printing and packaging, electronics and paper. With its comprehensive product portfolio and its extensive knowledge of the industry, the Dispersions & Resins division offers its customers innovative and sustainable solutions and helps them advance their formulations. For further information about the Dispersions & Resins division, please visit www.dispersions-resins.basf.com.

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

CUSTOMCELLS® – AHEAD IN CELL INNOVATION

CUSTOMCELLS® is one of the leading companies in the fields of development and series production of special lithium-ion battery cells. Based on flexible manufacturing concepts and state-of-the-art research and production facilities, CUSTOMCELLS® guarantees high-tech solutions for special applications and customized development and production of electrodes, electrolytes, battery cells and battery modules, depending on the customer's requirement profile. In doing so, CUSTOMCELLS® systematically pursues the strategy of technological, vertical integration through cooperation with the respective "best in class" companies in the value chain - from the material manufacturer, to the plant manufacturer, to the recycling specialist. Spun off from the Fraunhofer

Institute in 2012, the company now has two independent production and development sites in Itzehoe and Tübingen. More than 100 highly qualified CUSTOMCELLS® employees have many years of experience in the field of cell development and production. The extensive process engineering know-how and the deep understanding of electrochemistry ensure short time frames for the realization of individual cell properties. CUSTOMCELLS® develops and produces for a wide range of industries - with a focus on automotive, marine, oil & gas and, in the future, aviation. The company has more than 600 customers, completed more than 1,400 development-intensive projects, and conceptualized and ramped up four cell factories under contract. From 2021, CUSTOMCELLS® will take over the development of the next generation of high-performance batteries for the automotive sector in a joint venture with Porsche – the Cellforce Group. The Porsche decision in favor of CUSTOMCELLS® was made in spring 2021 after careful global screening.