



We create chemistry

News Release

BASF drives forward eMobility solutions at the 2024 North American Battery Show

WYANDOTTE, MI, October 1, 2024 – BASF will showcase its innovative chemistries at the North American Battery Show 2024 in Detroit, Michigan, from October 8 to 10, at booth 3000. Higher power and range demands for electric vehicles (EV) are creating new challenges in design, thermal, assembly, safety, system, and operating conditions. Innovations across the electric powertrain, battery packs and charging infrastructure will continue to drive EV availability for everyone. Our goal is to empower automotive manufacturers and suppliers to create the next generation of safer, more efficient, and more environmentally friendly vehicles across all value chains.

Battery materials and recycling solutions

Battery materials are at the heart of ion-lithium batteries as they significantly determine their performance. BASF offers a broad cathode active material (CAM) portfolio for lithium-ion batteries, with technologies like nickel-cobalt-aluminum oxide (NCA), nickel-cobalt-manganese-oxide (NCM) and lithium-cobalt-oxide (LCO). BASF also provides base metals sourcing and management to ensure a reliable and sustainable supply chain for the production of cathode active materials. Additionally, the company offers comprehensive battery solutions that provide customers with recycled metals with a lower carbon footprint compared to virgin metals, helping our

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customers in reaching their sustainability targets and regulatory requirements.

Battery cell processing additives

BASF's high-performance battery cell additives for cathode, anode layers and separator coating in electrode processing aid in smoother and more efficient battery cell processing. Our additives consist of dispersing agents that enable a viscosity reduction that increase solid content of cathode slurry and improve batch-to-batch consistency, wetting agents that reduce defects during coating and improve application efficiency, and flexing agents that enhance film flexibility and enable a thicker cathode film.

Sealants and binders

To help reduce the risk of electrochemical disturbances in EV batteries, OPPANOL[®], an electrochemically inert polyisobutylene, provides excellent barrier properties, electrical insulation and adhesion to various surfaces. Its strong compatibility with other polymers, resins and fillers and self-healing effect reduces the risk of physical damage or premature failure.

The high colloidal stability of Licity anode binders, explicitly designed for lithium-ion batteries, provides an overall cleaner and better performance in lithium-ion cells and makes them highly compatible with co-binders like carboxymethyl cellulose (CMC). In addition, they exhibit exceptional processability and superior coating behavior, as well as excellent mechanics and electrochemical performance.

Surface treatments, coatings and adhesives

For optimal protection and enhanced performance across a wide range of platform designs and battery systems, BASF offers a range of innovative surface treatments and coating solutions. These solutions span pretreatment to e-coat to fire protection and are instrumental in achieving customer-desired outcomes.

BASF's CathoGuard[®] portfolio further provides comprehensive corrosion protection for multi-metal car bodies and components, including battery covers, ensuring that all vital components remain shielded from the damaging effects of corrosion. Chemetall's eco-friendly Oxsilan[®] thin film technology applies a uniform and protective layer on

metal surfaces. When paired with CathoGuard technology, this combination significantly bolsters corrosion protection, thereby improving the durability and performance of battery systems.

Polyurethane systems and engineering plastics

BASF offers a broad portfolio of polyurethanes and engineering plastics for battery pack applications. Our innovative, high-performance solutions meet the demanding conditions in the automotive industry, achieving the highest safety, durability and mechanical strength standards.

BASF's Elastan[®] PU thermal conductive adhesives and gap fillers, a 2K, solvent-free system, are thermally conductive up to 2W/mK with low squeeze flow for dispensing rates up to 100cc/second with excellent bonding properties. Battery potting made from Elastolit[®] PU systems protect the battery pack for all battery types and enhances the structural stability for cell-to-pack batteries. Battery covers, made from Elastoflex[®] PU system via our spray transfer molding process, provide superior impact performance compared to aluminum.

We offer a broad portfolio of engineering plastics, including flame-retardant (FR) options, for high-voltage power electronics based on Ultramid[®] PA6, PA66 and PPA, and Ultradur[®] PBT. Some optimized grades with high contact values are available for laser welding. These FR materials maintain key properties like strength and stiffness while offering a range of benefits in the manufacturing process. Other dimensionally stable FR Ultramid grades enable customers to use glass-reinforced materials with outstanding warpage control. Our Durable Color (DC) orange portfolio is pre-colored with superior color stability up to 150C.

Esters, coolants and fluids

To help lubricant formulators meet the increasing demand for high lubricant performance and long product life, we offer a broad range of Synative[®] esters for increased cooling capacity and improved thermal control with a superior sustainability footprint; the Glystantin[®] Electrified[®] product family offers premium engine coolants designed to protect vehicles across all powertrains against overheating, corrosion and frost; and, Emgard[®] MTF 7000 transmission fluid protects from corrosion, foaming,

wear and rust for heavy-duty, 4-speed EV transmissions.

Visit BASF at booth 3000 October 8 to 10 from more information.

https://on.basf.com/BASF_NABatteryShow_booth-3000

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About BASF

BASF Corporation, headquartered in Florham Park, New Jersey, is the North American affiliate of BASF SE, Ludwigshafen, Germany. BASF has approximately 16,000 employees in North America and had sales of \$20.5 billion in 2023. For more information about BASF's North American operations, visit www.basf.com/us.

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.