



Press Release

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Covestro partners with Coleitec to expand the new application of polyurethane composite materials

- **Realizing the mass production of PU composite battery pack top covers at a major power battery manufacturer**
- **Expanding the application of polyurethane composite materials in the new energy industry**

Materials manufacturer [Covestro](#) and high-tech enterprise [Coleitec](#) today signed a strategic cooperation agreement at Covestro's booth at the China International Import Expo. The two parties have agreed to work together to accelerate the application development of polyurethane (PU) composite materials and further strengthen market-oriented cooperation.

Coleitec is committed to providing high-performance and lightweight composites solutions, while Covestro is the inventor of polyurethane. The two companies launched the High-Pressure Resin Transfer Molding (HP-RTM) PU battery pack top cover solution and successfully realized mass production at a major power battery manufacturer. This cooperative research and development has pioneered the application of PU composites in the new energy vehicle battery pack field.

Lightweight solutions that improve production efficiency and ensure cost competitiveness

This year, this polyurethane battery pack top cover solution has passed the compliance testing of the EU's REACH and RoHS regulations, and China's GB38031-2020 testing. It scores highly on mechanical properties, high temperature and humidity aging, xenon lamp aging, acid and alkali resistance, high-temperature resistance and insulation properties. The new PU HP-RTM process is a lightweight solution which meets the requirement of "replacing steel with plastic". Thanks to its strong physical properties and low-density advantages, the thinnest part of the cover achieves 0.8mm, significantly reducing the overall weight. It is 60 percent lighter than strength steel, 20 percent lighter than aluminum alloy, and 50 percent lighter than SMC composites.

Compared with other processes, the HP-RTM process realizes the automation layout to greatly improve production efficiency and reduce manufacturing costs. An assessment of its life cycle shows that the HP-RTM process reduces carbon emissions compared with the traditional metal process.

Dr. Irene Li, the head of R&D at Tailored Urethanes Business Entity in Asia Pacific of Covestro, said, "This is a new PU application in the field of new energy vehicles. It

took us only 18 months from development to mass production, which is a gratifying achievement of Covestro and Coleitec. We believe that the strategic cooperation with Coleitec will enable more innovative PU applications to be implemented in the downstream value chain.”

Jointly expanding the application of PU composites in the new energy industry

Covestro and Coleitec will further cooperate under this strategic agreement, utilizing global research and development resources in the automotive industry and developing the new energy industry. The development mainly focuses on two aspects. One is to increase the performance of PU solutions and exploit the advantages of PU resin so they are suitable for more applications. The second aspect is to develop the applications of bio-based raw materials to reduce carbon emissions and promote the circular economy.

Markus Mingenbach, Vice President of PU Specialties at Tailored Urethanes Business Entity of Covestro, said, “The signing of the strategic agreement signals the beginning of a much deeper partnership between both companies. We look forward to further developing cost-efficient and tailor-made PU solutions in the domain of new energy vehicles, solar energy, and energy storage. Only through deep collaboration with foresight clients can we achieve our vision of a circular economy.”

Dr. Peng He, Chairman of Coleitec, said: “As a fast-growing technology-based enterprise, innovative product development is the top priority of Coleitec's development. Through full cooperation with Covestro, we have jointly developed and expanded new applications of polyurethane materials in the field of new energy vehicles and provided innovative, functional, economical, and lightweight product solutions for end customers, giving them a sharp competitive edge over others. I believe that with the joint efforts of both sides, more high-quality and high-performance fiber composite innovative products will be presented in the future.”

About Covestro:

Covestro is one of the world's leading manufacturers of high-quality polymer materials and their components. With its innovative products, processes and methods, the company helps enhance sustainability and the quality of life in many areas. Covestro supplies customers around the world in key industries such as mobility, building and living, as well as the electrical and electronics sector. In addition, polymers from Covestro are also used in sectors such as sports and leisure, cosmetics and health, as well as in the chemical industry itself.

The company is committed to becoming fully circular and is striving to become climate neutral by 2035 (scope 1 and 2). Covestro generated sales of EUR 15.9 billion in fiscal 2021. At the end of 2021, the company had 50 production sites worldwide and employed approximately 17,900 people (calculated as full-time equivalents).

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