Press release

Leverkusen,
November 29, 2018

Covestro AG
Communications
51365 Leverkusen

Contact
Dr. Frank Rothbarth
Telephone
+49 214 6009 2536
E-mail
frank.rothbarth
@covestro.com

Harnessing solar power for residential and commercial applications

Powerful and safe battery home storage

BMZ GmbH relies on polycarbonate blends from Covestro

The use and storage of renewable energies is also finding increasing application in private and commercial environments: stationary home battery storage systems based on Li-ion battery technology are a market with a great future. BMZ GmbH, a leading system supplier for lithium-ion batteries, develops such battery home storage devices, which are also marketed under its own name as the EES 7.0, EES 9.0 and ESS X storage series. This means that the regenerative solar power generated in photovoltaic systems can be used in private and commercial applications more independently of the time of day and the position of the sun.

Covestro supports the various BMZ battery projects with material selection, during plastic-compatible component design and with CAE-based component simulations to meet the requirements of the UN Transport Test for Batteries (UN 38.3). Further services include moldflow analyses and technical injection molding support.

"Every battery project is technically demanding, which is why I am all the more pleased that plastics from Covestro can make an important contribution here," explains Jens Ufermann from Covestro, who looks after BMZ GmbH locally, adding: "Together with customers like BMZ, we are working on sustainable product and application developments to master the challenges of future battery technologies."

High requirements for stationary and mobile applications
Similar to battery systems for mobile applications such as cars, buses, scooters and pedelecs, energy density and safety are important aspects in the

development of battery products for stationary use, as is the case with BMZ GmbH's energy storage systems.

"Our in-depth understanding of the diverse applications of battery systems and our many years of experience in materials for battery applications enable us to provide our customers with both technical expertise and suitable products," says Dr. Julian Marschewski, Market Development Manager in Electric Vehicle Battery Packaging.

Polycarbonate blends with tailored properties

Bayblend® (PC+ABS) blends from Covestro play an important role in both mobile and stationary battery applications, for example in placing individual cylindrical battery cells in 18650 or 21700 format in a cell holder. To achieve this, the material must have excellent mechanical properties, above all high impact strength, but also high flowability in order to achieve the thinnest possible walls between the individual battery cells when manufacturing the cell holders through injection molding.

Additional safety in later use is provided by the incorporation of flame retardant grades that meet the high flame retardancy standards of Underwriters Laboratories according to category UL 94 V-0.

Broad range of products

The Covestro portfolio for battery applications continues to evolve. For cell holders for holding cylindrical battery cells, pouch cell frames, battery housings and similar applications the focus is on both unfilled (Bayblend® FR3010, Bayblend® FR3040) and mineral-filled (Bayblend® FR3020, Bayblend® FR3021) along with glass-fiber-reinforced (Bayblend® FR3060 EV) flame retardant Bayblend® products. Covestro also offers thermally conductive polycarbonate grades of the Makrolon® TC product family that can contribute to battery thermal management.

About Covestro:

With 2017 sales of EUR 14.1 billion, Covestro is among the world’s largest polymer companies. Business activities are focused on the manufacture of high-tech polymer materials and the development of innovative solutions for products used in many areas of daily life. The main segments served are the automotive, construction, wood processing and furniture, and electrical and electronics industries. Other sectors include sports and leisure, cosmetics, health and the chemical industry itself. Covestro has 30 production sites worldwide and employs approximately 16,200 people (calculated as full-time equivalents) at the end of 2017.

About BMZ:
The BMZ Group is a global player in the manufacture of lithium-ion system solutions. The Group has its headquarters in Germany and production facilities in China, Poland and the USA, as well as branches in Japan and France. In addition, the company has R&D locations worldwide. BMZ has more than 25 years of experience and over 2,000 customers and implements around 250 new projects each year.

The BMZ Group is a tier one supplier of lithium-ion applications for all market segments and products that require batteries. BMZ is a system supplier for all types of products with lithium-ion applications such as energy storage systems, e-bikes, large batteries for buses, forklifts, eboats, industrial trucks, sweepers, aerospace applications, power and garden tools and medical equipment. BMZ develops, documents and designs components of lithium-ion systems for the customer's products. Around 3,000 employees work for the BMZ Group worldwide.

This press release is available for download from the Covestro press server at www.covestro.com. A photo is available there for download as well. Please acknowledge the source of any pictures used.

For more information please see **www.covestro.com** and **www.bmz-group.com**.

Follow us on Twitter: **https://twitter.com/covestro**

ro (2018-164E)