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ASIA EDITION

Covestro to introduce future drug delivery concept in Asia

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As an innovative partner, Covestro not only supplies advanced materials to customers, but also provides them with custom solutions for the whole industry chain by means of open innovation

Covestro is attending the China International Medical Equipment Fair (CMEF) spring show - the leading event in China's medical equipment industry. At the event, Covestro will debut its connected drug delivery concept in Asia and showcase solutions for smart wearable devices, surgical applications, renal dialysis and medical device miniaturization.

"Medical devices have become increasingly miniaturized and intelligent in recent years. Smart wearable devices now include multiple functionalities, e.g. vital sign monitoring, continuous drug delivery, activity tracking and internet connectivity, bringing new possibilities to the development of medical devices," said Dr. Douglas Hamilton, global healthcare segment marketing leader of Business Unit Polycarbonates at Covestro. "Medical-grade plastics are also seeing higher requirements for quality, device productivity and design freedom. Medical-grade plastics from Covestro will enable our customers to tackle these challenges."

For the connected drug delivery concept, Covestro used Makrolon®polycarbonate to produce the outer casings. Makrolon® medical-grade polycarbonates have glass-like transparency, offer excellent impact resistance, dimensional stability, design flexibility, durability, and can aid in improving dose accuracy. They meet the strict requirements of a wide range of medical products and are one of the optimal material choices for drug delivery innovation.

Covestro material solutions have also been widely used in portable healthcare devices. Covestro supplied Bayblend®

PC/ABS material for the hygrothermograph and digital thermometer made by MMC, a connected healthcare equipment start-up, and also provided ample and timely technical support in their development and production.

Bayblend® is eco-friendly, possesses a halogen-free flame retardant formula and helps their products pass the medical device certification requirements of the China National Medical Products Administration and rigorous medical-grade biocompatibility tests. Moreover, this material features excellent color consistency, smooth surfaces and easy molding of the rounded edgeless design, thus ensuring the high impact resistance of the application at lower production costs.

Needle-free syringes manufactured by Beijing-based QS Medical Technology Co., Ltd. use Makrolon® Rx1805, a medical-grade polycarbonate supplied by Covestro. The polycarbonate is durable, lipid-resistant, biocompatible and suitable for flexible design. At the same time, Makrolon®polycarbonate can meet the multiple requirements of the ampoules for the needle free injector and the drug delivery component in terms of strength, molding precision, dimensional stability, drug inertness and gamma sterilizability.

Also being showcased at the Covestro booth are:

- Integrated syringe closure using Apec® 1745 high-heat polycarbonate from Covestro: Prefilled syringes have achieved strong market growth and are widely used in the treatment of chronic diseases such as rheumatism. Apec® 1745 is transparent, heat-resistant and can be sterilized by conventional methods, such as by gamma ray or ethylene oxide. Additionally, this material is dimensionally stable, maintains excellent dimensional accuracy even at high temperatures, and provides superior impact resistance.
- Makrolon® Rx3440 from Covestro offers superior durability and chemical resistance to aggressive solvents and enables healthcare professionals to safely deliver oncology drugs to patients.
- Makrolon® Rx2235 from Covestro features superior high flow properties and is used for thin wall applications. Meanwhile, it meets the requirements of various medical sterilization options and provides design freedom. This material can be easily used in multi-cavity mold production to reduce part production costs and increase production efficiency.

Also on display will be Maezio(TM), a new continuous fiber-reinforced thermoplastic composite from Covestro and a new option for metal replacement. It has a high specific stiffness and strength compared to magnesium and aluminum while being extremely lightweight. It is also scalable and sustainable.

As an innovative partner, Covestro not only supplies advanced materials to customers, but also provides them with custom solutions for the whole industry chain by means of open innovation. Relying on our experience and expertise, Covestro provides trend insights and regulatory guidance to customers, enabling them to bring their ideas to reality.

The CMEF spring show is being held at the National Exhibition and Convention Center in Shanghai from May 14-17, 2019.