

Press Release



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Easier, Safer and Less Painful Options for Diabetic Treatment

Introducing new solutions for needle-free injection technology

Imagine being able to treat diabetes without needles. For more than 114 million Chinese patients, it can be a reality. QS Medical Technology Co., Ltd. (QS), based in Beijing, has designed a new needle-free injection technology that is safe, highly-effective and more comfortable for patients with diabetes. The drug is injected at high pressure under the skin surface.

“We are focused on developing innovative medical products to make life a little easier, safer and more comfortable for millions of patients in China and around the world,” said Justin Zhang, Founder and General Manager for QS. “That’s why we have partnered with Covestro to produce high-quality, needle-free injectors to meet the needs of a growing number of patients with diabetes,” said Zhang.

“Our vision is to make the world a brighter place,” said Wang Xinyu, Sales Director for China, Healthcare Sector, Covestro. “For patients with diabetes, that means working to find solutions that push the boundaries of what is possible. Needle-free technology can provide patients with a more comfortable, efficient injection experience and help increase medication compliance.”

Proven plastic for medical technology

Based on its previous experience in the area of needle-free injection, QS selected Makrolon® Rx1805, a medical-grade polycarbonate from Covestro, for the medicine ampoules. Makrolon® medical-grade polycarbonates have excellent properties of durability, processability, safety and design flexibility, which meet the stringent requirements of a wide variety of medical products. With superior material performance, Covestro provides QS with total material solutions for its needle-free syringe products.



“Makrolon® Rx1805 polycarbonate is mainly used in the production of the insulin-delivery interface and for molding the ampoules containing the medication for needle-free syringe products,” said Su Ning, head of QS Product Center. “The material meets our requirements for the plastic drug-delivery components and ampoule bottles for precise size, high strength and toughness. It ensures that the drug-delivery component can consistently and safely puncture through the plug of an insulin ampoule and fulfills our design, so that the drug-sampling needle and the protective cover of the drug suction apparatus are manufactured in one shot via injection molding.”

Tailor-made properties

The main benefits of Makrolon® Rx1805 polycarbonate from Covestro are:

- Resistant to cracking against lipids
- Resistant to radiation sterilization and able to ensure high productivity and efficiency during the molding of the ampoule bottles
- Biocompatible and complies with multiple requirements of ISO 10993
- High impact resistance
- Accuracy in molding size, and able to maintain stability under different application environments

“Our Research and Development goal for the next decade is to integrate injection drug with needle-free technology, and launch more convenient pre-loaded, needle-free administration systems to the market,” said Zhang. “To do this, we hope to develop a collaborative partnership with Covestro to push the boundaries in technology innovation for needle-free injection.”

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 QS:

Established in 2007, Beijing QS Medical Technology Co., Ltd. is a high-tech enterprise focused on the R&D, production and sales of needle-free drug delivery equipment. The company’s production and R&D facility is located in the Daxing Economic and Technological Development Zone of Beijing, with a 100,000-level clean room, 10,000-level aseptic laboratory and automatic



production lines of needle-free syringe consumables, with capacity of producing over 10 million sterile consumables each year. At present, the company has developed a variety of needle-free injection products, which can be used in the injection of insulin, auxin, interferon, vaccine, ephedrine and more.

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