

Press Release



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New polycarbonates from Covestro

Medical products for increasing requirements

Materials for drug delivery devices and surgical instruments

Medical devices are subject to ever-increasing requirements in terms of functionality and durability. This is the case, for example, for auto-injectors and injector pens, which patients use to administer therapeutic drugs themselves – so-called “drug delivery devices”. Patients expect these devices to work reliably every time they are used, whether at home or on-the-go. For these devices, [Covestro](#) offers two new families of the polycarbonate Makrolon®: improved low-friction types and maximum strength glass-filled products. The latter are also suitable for sophisticated surgical instruments.

Smoother movement without lubricants

The new low-friction polycarbonates Makrolon® M204 LF, Makrolon® M402 LF and Makrolon® M404 LF ensure that injections proceed smoothly and reliably – also without additional lubricants. Any place where plastic parts slide against one another, primarily in injectors, in the operating room and in patient care, the low-friction and wear-resistant plastics help facilitate the handling of devices. Covestro will showcase the new products in a [customer webinar](#) on March 30, 2021, from 3 to 4 pm CEST.

“With the new polycarbonates, we are helping medical device companies develop instruments for new trends in drug delivery devices,” says Irving Paz Chagoya, healthcare segment manager for polycarbonates in the Europe, Middle East, Africa region at Covestro. “In addition to the product advantages, they can also benefit from our more than 50 years of experience in the healthcare industry.” All new products are available worldwide.



The low-friction plastics also feature high dimensional stability and are superior in this respect to the competing material polyoxymethylene (POM). They also meet requirements in terms of durability, comply with ISO 10993-1 biocompatibility standards of and can be sterilized using different methods, such as gamma radiation.

High and lasting strength

The new glass-filled polycarbonates are in demand when it comes to maximum strength and durability; for example, in surgical instruments and in drug delivery devices. The load-bearing interior parts of self medication devices are one example, particularly those with viscous or high-volume medicines. Single-use sterile instruments are a current trend in surgery for reducing the risk of infection. In addition, a solid thermoplastic polymer can be more efficient than a metal material.

These products are divided into two series with different strength levels. The high performance series includes the polycarbonates Makrolon® M810 GF, Makrolon® M820 GF and Makrolon® M830 GF. The high flow series includes the polycarbonates Makrolon® M410 GF, Makrolon® M420 GF and Makrolon® M430 GF. The latter are used for filling larger or thinner parts with improved productivity. All types are dimensionally stable and biocompatible according to ISO 10993-1.

Compared to the competitive product glass fiber reinforced polyamide, glass fiber filled polycarbonates exhibit a better combination of different properties when used for drug delivery devices and surgical instruments. This improves their resistance to humidity and temperature fluctuations as well as their mechanical properties. Aided by a special process called Rapid Heat Cycle Molding (RHCM), parts which require particularly glossy or smooth surfaces can be produced from these Makrolon® GF types.

About Covestro:

With 2020 sales of EUR 10.7 billion, Covestro is among the world's leading polymer companies. Business activities are focused on the manufacture of high-tech polymer materials and the development of innovative, sustainable solutions for products used in many areas of daily life. In doing so, Covestro is fully committed to the circular economy. The main industries served are the automotive and transportation industries, construction, furniture and wood processing, as well as electrical, electronics, and household appliances industries. Other sectors include sports and leisure, cosmetics, health and the chemical industry itself. At the end of 2020, Covestro has 33 production sites worldwide and employs approximately 16,500 people (calculated as full-time equivalents).



Forward-looking statements

This press release may contain forward-looking statements based on current assumptions and forecasts made by Covestro AG. Various known and unknown risks, uncertainties and other factors could lead to material differences between the actual future results, financial situation, development or performance of the company and the estimates given here. These factors include those discussed in Covestro's public reports. These reports are available at www.covestro.com. The company assumes no liability whatsoever to update these forward-looking statements or to make them conform to future events or developments.