

Press Release



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The next generation of electronic patches

Covestro and the Holst Centre develop skin-friendly wearables

Wearable electronic patches (wearables) are already being used in many areas of medicine, including patient monitoring and diagnosis. Market demand is rising rapidly, in line with a growing digitalization of the healthcare sector. The design of these patches allows a variety of applications in monitoring vital parameters. They offer patients more freedom of movement. The wearables must be worn on the skin around the clock for a prolonged period of time so they need to be particularly kind to the skin, comfortable, but also adhere to the skin. In addition, they should be removed as painlessly as possible.

[Covestro](#) offers material solutions for improved design compared to marketable products. The range is a response to the growing customer demand for materials with increased wearing comfort. Covestro offers the right combination of materials for the perfect lightweight, flexible and hardly visible patch that provides a comfortable feel. There is no comparable offer on the market so far.

Complete solution for modern wearable patches

For this purpose, Covestro has developed special breathable thermoplastic polyurethane (TPU) films from the Platilon® range. The materials are perfectly suited and designed for customers using a roll-to-roll manufacturing process that allows wearables to be efficiently produced. The electronics can be printed on the film and embedded in thermoformable polyurethane foam covered with a second film layer for better wearing comfort. The patch is then fixed with a special skin-compatible adhesive, which adheres firmly to the skin but allows painless removal of the patch. The adhesive system and the thermoformable foam are based on Baymedix® polyurethane raw materials. Covestro thus offers a complete solution for modern and high-quality wearable patches.



A prototype was produced in collaboration with the [Holst Centre](#), which is known for its expertise in printed electronics and wearables. The materials being used are already ready for the market. In addition to the wearable patch, Covestro will present a design study at [K 2019](#) to present different wearable designs depending on their medical use.

Covestro is providing convincing design and material alternatives to currently available wearable raw materials. The company is considering advances in printed electronics to demonstrate that its materials can contribute to a design with a stronger patient focus that takes into account patient comfort and skin sensitivity.

About Covestro:

With 2018 sales of EUR 14.6 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 16,800 people (calculated as full-time equivalents) at the end of 2018.

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

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