

# Wearables

## Comfortable, Reliable, Flexible.

Being a long established supplier of adhesive coated materials and die-cut pieces for medical applications, Lohmann has built on its knowledge and reputation in stick to skin products for wearable applications. Working closely with customers at the start of the product development process, Lohmann can customise and test solutions to ensure that these meet the expectations. Whether the requirements for an adhesive are to provide short or long-term fixation, stick on geriatric or neonatal skin or provide a load bearing function, Lohmann can provide innovative solutions in roll or die-cut formats and help customers integrate these solutions into their processes.



### Patch Pumps

Subcutaneous delivery of large-volume modern pharmaceutical and biotech products are being transformed from doctor or hospital to the home by the development of patch pump systems for self-administration by patients. Many delivery systems only require fixation of up to 1 hour and are used irregularly whereas insulin delivery devices are applied for up to 3 days and will be used all year round.

Whether you need a skin or construction adhesive tape that provides cushioning combined with conformability for larger devices and short term applications or flexibility and increased shear resistance for 3 day use, Lohmann has available tape solutions to cater for these differing needs. Customised die-cuts can incorporate membranes or conductive elements to provide additional functionality.

### Mobile Cardiac Telemetry

Unlike holter monitors that are attached to the body for one or two days and are mostly connected to a reader with wires, this method uses a small portable device that has an extended memory and is capable of continuous measurement of heart rate and rhythm over several days or weeks in all live situations.

Lohmann combines its knowledge of adhesive development and raw materials with its comprehensive die-cutting capability to support manufacturers of mobile cardiac devices to develop and enhance their products with ever increasing functionality and performance.

### Sensor Fixation

Tracking vital signs at all times directly on the skin is becoming the norm: from fitness and wellness trackers to patient-centered care and monitoring essential vital functions of patients – realtime data generated and transmitted by today's sensors provide insight into fitness levels, allow treatment adjustments or remote interventions as necessary. Sensors need to be attached to the body securely during the monitoring period whether this is a few hours or 2 weeks and more. At the same time adhesives need to be so comfortable and conformable that the device becomes unnoticeable.

Lohmann offers adhesive solutions and die-cut parts covering the varying needs of sensor applications. Providing non-irritating adhesive solutions for a wide variety of skin types and differing wear times of up to 14 days or more on a variety of flexible, breathable backing materials to deliver the best combination for accurate results.

### Infusion Sets

Used for continuous drug delivery, infusion sets need to be securely and reliably attached to the skin for periods of up to 7 days. When choosing the adhesive and backing material it is important to not only understand application location, period and patient profile but also downstream manufacturing processes such as welding or potential in use-hazards like knocks or pulling.

Tailored tape solutions from Lohmann cater for the different demands of infusion set products, providing secure drug delivery while also being kind to your skin even if used long term. Die-cuts are customised to ensure ease of use for patients when applying the infusion set.



## Lohmann, The Bonding Engineers

### Integrated innovative solutions.

As a world-leader in the development, manufacture and supply of adhesive tape solutions, Lohmann is a trusted partner for the design, scale-up and commercialisation of your medical device.

Our "local for local" approach together with a fully integrated supply chain gives Lohmann a truly unique position and one which our customers appreciate as real added value to their business.

At Lohmann we have an in-depth knowledge and capability in many chemistry platforms, including Acrylic, Synthetic Rubber, Silicone, Cyanoacrylate, Epoxy and Polyurethane. Our experience in coating solvent, water-based, hot-melt and multi-component reactive systems ensures that we are never restricted in our ability to develop and deliver customers with the best solution for their application.

By choosing Lohmann as their partner our customers have access to a highly specialised, experienced and effective Medical team who together with the Lohmann organisation can offer:

- a dedicated project management team
- experience of sourcing, developing and processing high-value functional materials
- a broad die-cutting capability including roll-to-roll flat-bed, rotary, pick-and-place and laser-on-the-fly
- expert in-house testing equipment and test method development
- product development and validation processes tailored to customers requirements
- to supply small quantities to support scale-up
- robust, well documented, traceable and fully auditable processes in accordance with EN ISO 13485 Quality Management System.

We look forward to receiving your challenge!

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