INNO TAPE

CASE STUDY

GLASS COVER BONDING

WHEN PRECISION BENEATH THE SURFACE IS CRUCIAL

A glass cover had to be bonded precisely and permanently to a printed circuit board – tightly, partially opaque and reliably. However, the liner adhered too strongly, the moulded parts slipped and the positioning pins stuck to the adhesive.

INNO TAPE developed a solution with a split removable liner, inner liner protrusions for clean placement and additional positioning aids for precise assembly. The result: error-free, stable series processes and a clean appearance.

Find out in our case study how small changes can bring big process advantages

GLASS COVER BONDING

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INITIAL SITUATION

A supplier of climate control systems faced a complex challenge: the glass cover of a control device had to be bonded to a printed circuit board over its entire surface, permanently and with a flawless appearance – without visible inclusions, without misalignment and without compromising the functionality of the overall system. The bond had to be not only mechanically stable, but also visually high-quality and durable over the long term.

Challenges

- Flat bonding with suitable adhesive tape thickness
- High holding force and tightness
- Blockout function (light shielding in confined areas)
- Semi-automatic further processing without slipping
- Excessive liner adhesion – tape shifted when removed
- Positioning pins on the device stuck to the adhesive edge
- Very tight tolerances for component fit

Objective

The company was looking for a full-surface, durable and visually clean bond between the glass cover and the circuit board that would offer strong holding forces while also being cream-resistant, light-tight and completely sealed.

OUR SOLUTION

Together with the customer, we developed a solution that is impressive in terms of both materials and processes.

Material selection

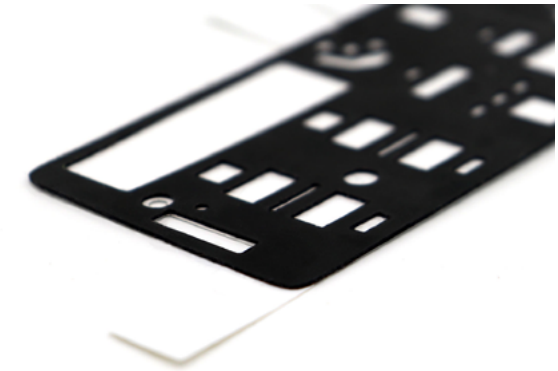
The tape was selected in an optimal thickness to ensure full-surface adhesion and complete sealing. The black design also gives the material a light-blocking function – especially in narrow bridge areas and between internal recesses.

Process optimisation

The ideal design for the moulded part was developed in several test runs. The tape was given several grip tabs and integrated positioning aids to enable easy and secure installation.

The liner was designed to be split so that the tape can be exposed section by section, keeping the moulded part stable during processing and preventing it from slipping. A new liner with lower adhesion also ensures controlled, even removal.

In order to prevent the positioning pins of the mounting device from coming into contact with the adhesive edge, internal liner projections were integrated.



At a glance

- Clean, tension-free bonding
- No slipping when removing the liner
- Highest fitting accuracy in the device
- Better ergonomics for employees thanks to easy handling
- Stable series processes with consistent quality

WHY INNO TAPE

With almost 20 years of experience in automotive converting, we combine technical expertise with an understanding of processes. We think beyond adhesive tape – we think about optimal assembly. From prototypes to series production, we develop solutions that work: technically, economically and reliably.

AND WHAT CAN WE DO FOR YOU?

No matter how far along you are in your project, feel free to contact us – we will support you and take the work off your hands: as a partner, manufacturer-independent, flexible and fast.

Your contact

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