Product Handling Manual – Chip Implanting

DuploTEC SBF – Reliable bonding on eco-friendly card materials

The payment card market is evolving rapidly, with a strong push towards sustainable materials as the industry shifts away from new PVC. While alternative materials such as Parley Ocean Plastic®, rPETG, PLA and recycled PVC (rPVC) offer clear benefits, bonding on these materials remains a challenge.

We provide chip embedding solutions that enable efficient and secure production of eco-friendly payment cards.

“Doing more while using less” is a key driver for success.

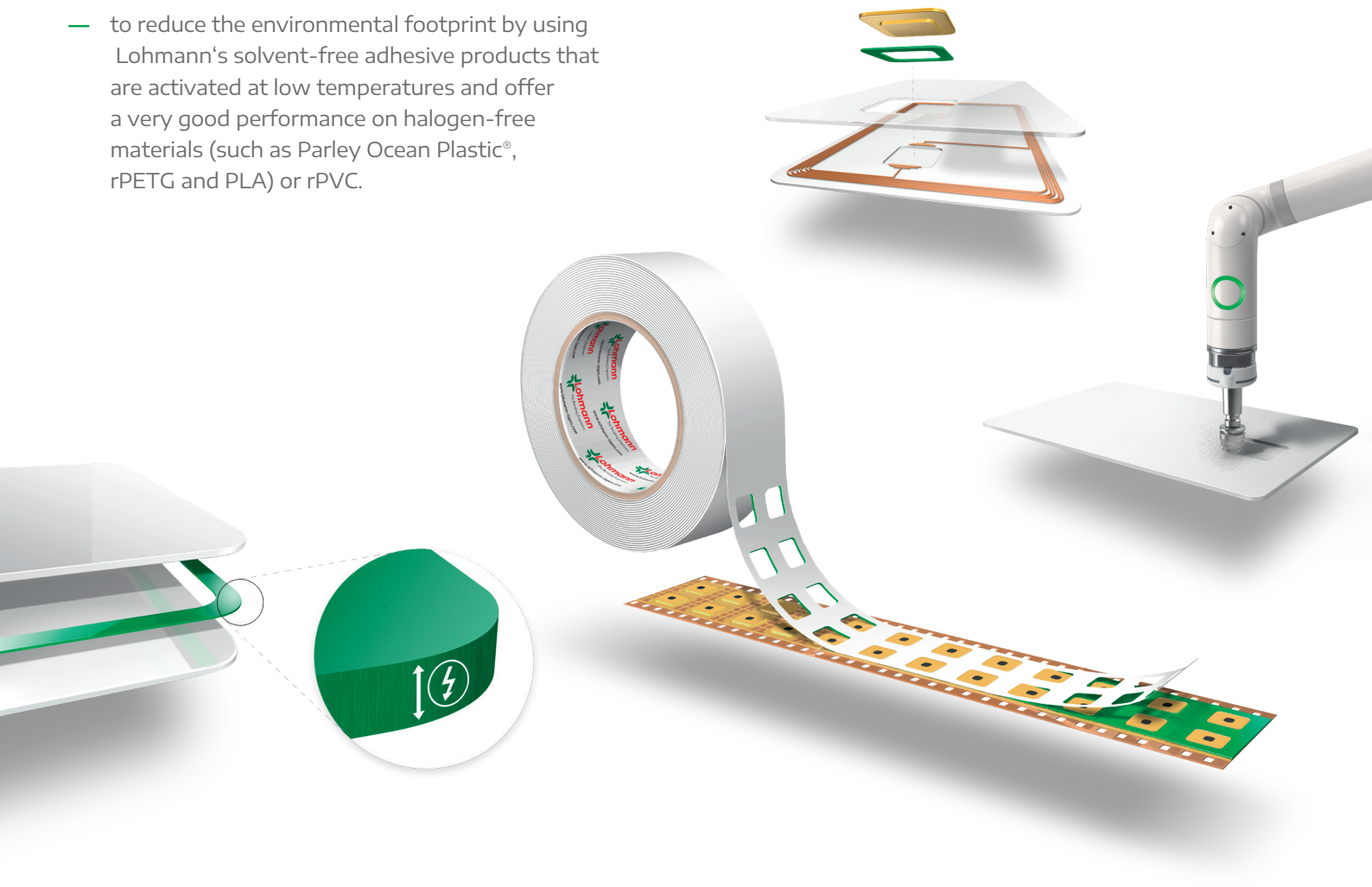
We help card manufacturers

- to create secure and reliable connections between chip modules and antennas
- to remain competitive by reducing energy costs and increasing output
- to reduce the environmental footprint by using Lohmann‘s solvent-free adhesive products that are activated at low temperatures and offer a very good performance on halogen-free materials (such as Parley Ocean Plastic®, rPETG and PLA) or rPVC.

With DuploTEC 12410 SBF and DuploTEC 12420 SBF EC we offer a solvent free, thermoset transfer film that is easy to use and can be electrically conductive in z-direction. This film can be used on in-use equipment, making it an efficient and cost-effective solution for any card manufacturer. It comes with a high flexibility after curing and does not embrittle. With DuploTEC SBF, card manufacturers can reduce their environmental footprint while still creating high-quality smart cards.

recycle

At Lohmann, we understand the importance of reducing environmental impact, and that‘s why we especially developed our products to be used with alternative card materials such as Parley Ocean Plastic®, PLA, R-PVC etc..



Processing Instruction

Product name		DuploTEC 12410 SBF	DuploTEC 12420 SBF EC
Substrates to bond		Dual interface / smartcard and fingerprint sensor modules	
		Card substrates (e.g. Parley Ocean Plastic®, rPET, rPETG, PLA, rPVC, PC, PVC)	
Standard width [mm] / length [m]		29 mm x 200 m	
Thickness [µm]		40	65
Type of adhesive		Latent reactive polyurethane Non-conductive	Conductive Silver-plated aluminium particles
Electrical resistance [mΩ / mm²]		—	≤ 200 mΩ / 0,25 mm² ≤ 100 mΩ / 1,00 mm²
Prelamination conditions	Temperature [°C]	50 — 60	50 — 60
	Time [sec]	1.5 — 5	1.5 — 5
	Pressure (N/cm²)	15 — 50	15 — 50
Main implanting conditions	Temperature [°C]	120 — 180	120 — 180
	Time [sec]	0.6 — 5	0.6 — 5
	Pressure (N/cm²)	50 — 150	50 — 150
Storage conditions		Below +35 °C at humidity level of 50 — 70 % r. h.	
Shelf life		12 months after production	

The process parameters are dependent on the used card materials / chip modules as well as on the processing machine.

Interested in finding out more on bonding solutions for smart cards & security applications?

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