

A firm eye
on the future



Products engineered for your success

Editorial

■ Ecology, individualisation, and mobility are three of the most important megatrends of our time. Together, they represent the automotive industry, much more than other sectors, with major challenges, and this applies to the entire supply chain. Thus combined expertise in all processes is required, as with any innovative product launch.

■ As one of the leading specialists in individual coatings, composites, hybrid structures and finishes, CaPlast rises to this challenge. Proficient development work has been successfully completed in two innovation areas: Surfaces resembling lacquer with a high quality appearance for individual internal and external applications, and lightweight low-resource fibre composites for sustainable product innovations.

■ The introduction of the back-injectable, solvent-free film for automotive interiors from the SmartSkin® family already was a decisive step. SmartSkin® EXTERIOR allows CaPlast to provide customized solutions able to cope with external conditions of sun, wind and hail, as well as other environmental influences, including withstanding harsh chemicals.

■ Sustainable and resource-efficient use of raw materials makes lightweight design a perennial issue in automotive and vehicle development. Thus some real highlights from the CaPlast technology centre are the new, lightweight semi-finished products which simplify the construction of sandwich composite panels. Use the results of our development work to further your own success. Contact us. We are keen to hear from you.



Intelligent, flexible and environmentally friendly: SmartSkin®

NEW

■ Comfort, function and design form a perfect symbiosis in modern textile materials for the automotive industry. Those have long been applied in the area of coating technologies. Acoustic properties, light weight and high deformability offer the potential for the development of further innovations. Modern supporting textiles in combination with high-performance coatings are opening up new and exciting applications as never before.

■ With the SmartSkin® product range, CaPlast has developed innovative composite materials that can be back injected, formed, or pressed. For example, matt, scratch-resistant and grained components can be produced at low cost using the in-mould graining process.

A new arrival: SmartSkin® EXT for external use

■ In close cooperation with Bayer MaterialScience, CaPlast has extended its SmartSkin® product family with a film for exterior applications of vehicles. Here, a partially reinforced textile substrate is coated with a special TPU functional layer. SmartSkin® EXT is resistant against UV, scratches and oil as well as surfactants. Its durable colour – and lightfast properties are like a high quality paint finish. SmartSkin® EXT is free of solvents and plasticisers, and guarantees a high-strength surface without additional coating layers. This opens up entirely new possibilities, for example in the design of sandwich elements in vehicle production.

Thermoplastic bonding always has a neat finish

■ Reinforcing laminates for self-supporting roof linings, designs for parcel shelves, non-woven fabric coverings for the undercarriage, as well as for acoustically effective components in the engine compartment, are coated by CaPlast with special thermoplastics, which are adapted to the particular finishing process. So for example, the coating is precisely applied to the substrate, so that film and fibre projections or spray from the adhesive application do not cause contamination under any circumstances.

Application-specific coatings

■ The coatings meet the requirements for the respective use of the products, they can be thermally re-activated and are bonded to various support panels, phones, carpets and non-woven materials. As usual, environmental and health factors are also considered: All coatings and laminations from CaPlast are free of plasticisers and solvents.



Leak-proof barrier films for the foaming process - finally pay for themselves!

■ Simple, inexpensive barrier coatings are often applied to the underside of the decor textiles for the rear shelf and load area. These do not satisfy the complex manufacturing process, e.g. with fluid 2-component systems using polyurethane and fibreglass. Pinholes and mechanical defects enable foam leakage again and again. Apart from uncontrolled processes, extra work and increased quality checks, these especially result in rejects.

■ CaPlast's new barrier layer securely protects the decor textile against foam leaks and in addition, has a surface which provides excellent adhesion to the fluid 2K-systems and rear-injected compounds on an on-going basis. Even if the costs of buying our barrier coatings are higher, the value outweighs the cost and they pay for themselves in the end!





Lightweight fibre composites for automotive applications

NEW

■ Saving weight whilst simultaneously offering high strength is one of the major goals in automotive manufacturing. Specialist manufacturers of mobile homes, commercial vehicles and sales vehicles are looking for light, thin-walled materials that are also impact-resistant, corrosion-resistant and durable. GFK or sandwich structures are in the testing phase, but in the mobile home sector timber constructions are still common practice. As a long-standing partner to well known manufacturers of fibre composite panels, CaPlast is applying its development and know-how in the first stages of the value chain in this area.

Lighter and more cost-efficient: an unbeatable combination

■ CaPlast has developed a low-cost thermoplastic fibre composite that in the near future is likely to ban wood in particular, but also other common composite materials from material mixtures for structures, roofs, walls and floors.

The engineering secret lies in the complex multi-layer construction from various plastic and reinforcing materials. Of course, this also dispenses with the need for resins, plasticisers and solvents. All solutions are customized and requirements for formability, strength, surface or adhesion properties can be adjusted individually. A further advantage for the manufacturer of fibre composite panels is that CaPlast fibre composites can be machined up to a width of 3300 mm.

CarTect® transport protection membranes protect value

■ The versatile applications of the CarTect® product family range from protecting individual vehicle parts, such as seats or convertible tops, to full transport protection of rail vehicles, commercial vehicles and boats. All the products are weather-resistant due to their functional coatings, UV-stable and resistant to a wide range of chemicals and oils, and, of course, long-validity test certificates are available for the entire CarTect® series released by the manufacturer.

■ Thus, the CarTect® H-series is the pinnacle of the CaPlast transport membranes. The formless, soft, hydroentangled spunbond nonwoven protects particularly sensitive surfaces.

Continuous further development and the trend toward individualisation

■ The only thing that is constant is change, thus even established products as CarTect® are improved continuously. New paints finishes as well as the global trend toward weight reduction and resource efficiency lead the way to further development. Individual membrane colours and printing also increase the recognition value of the OEM's brand.



CaPlast stands for innovative coatings and your success

Since 1967, CaPlast Kunststoffverarbeitungs GmbH has specialised in high-quality coating of diverse substrates. As a subsidiary of the well-established Mehler AG, it is part of the globally active KAP Beteiligungs-AG Group and has strong financial assets as well as market-based and application-related expertise.

This ensures continuous investment in high-tech equipment, as well as worldwide customer proximity. CaPlast develops innovative solutions alongside well-known industrial partners, for a wide range of applications. The company's core activities range from a broad product line for the construction sector to niche products for automotive applications. Through a clear strategy and constant training, we ensure we live up to our claim of demonstrating our ability as an innovative specialist for bespoke products in the field of coatings every single day.

1 Substrate materials

- Non wovens and felts
- All kinds of fabrics
- Paper
- Aluminium
- Foils
- Laid scrim
- Flexible composites
- Foams

2 Coating materials

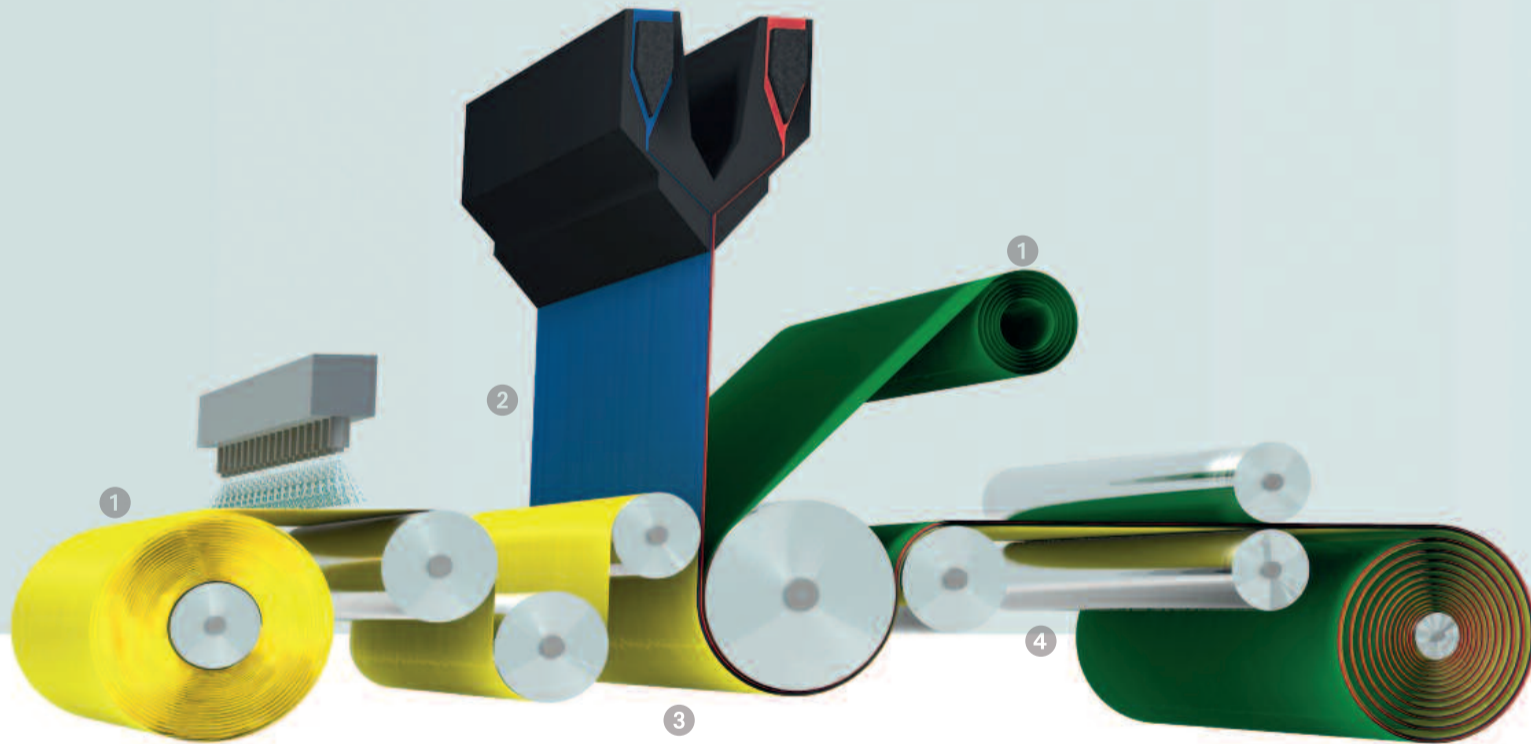
- Polyolefins
- Polyolefinecopolymers
- Polyurethane (TPU)
- Polyester
- Polyamide
- Other thermoplastic elastomers
- Other thermoplastic polymers

3 Technical possibilities

- Extrusion (broad slit nozzle)
- Lamination
- Coextrusion
- Pretreatment
- Single and double sided coating
- Coloring
- Marking (inline)
- Printing
- Application of adhesives
- Embossing
- Microperforation
- Converting and packaging
- Cutting

4 Influenceable properties

- Fire protection
- UV protection and weather resistance
- Tensile strength and elongation
- Surface structure /-tension
- Barriers
- Membran properties
- Chemical resistance
- Sealing / welding
- Tightness
- Coloration
- Gloss surface
- Haptic and optical properties
- Cutting strength



Roof & Building construction



Gardening & Landscaping



Underground engineering



Automotive



Packaging



Clothing



Hygiene