



# SYSTEM SOLUTIONS FOR MOBILE HOMES

High Performance Adhesives and Sealants  
for Comfort and Energy Efficiency



H.B. Fuller



KÖMMERLING

# COMFORT & ENERGY EFFICIENCY

Living just like at home – the highest comfort and optimal energy efficiency are simultaneously achievable by way of modern fastening solutions. Intelligent application of innovative adhesive technologies leads to the desired results in transport. KÖMMERLING offers powerful adhesives tailored to individual manufacturing processes and many different combinations of materials.

# BENEFITS OF ADHESIVE TECHNOLOGIES IN MODERN VEHICLE CONSTRUCTION

## MOBILE HOMES

Energy-efficient vehicles need to meet stringent requirements. To enable their fulfilment, we rely on technically sophisticated customer-specific solutions. The result are innovative products that already make welding, bolting and riveting unnecessary in many cases today.

On the one hand, KÖMMERLING products help to improve the noise dampening in vehicles such as motorcars, trucks, buses, caravans and ships, for example, leading to greater comfort. And on the other they also ensure a weight reduction that is immediately reflected in lower fuel consumption – and thus in the preservation of natural resources. Designed for more efficient transport, our products hence ultimately also benefit nature.

### Benefits

#### Cost savings

- ✚ Lower fuel costs through weight reduction
- ✚ Lower manufacturing costs by reducing the number of process steps
- ✚ Lower repair costs, fewer down-times thanks to reduced corrosion, etc.
- ✚ Lower long-term investment costs thanks to greater longevity

#### Added value

- ✚ Enhanced functionality
- ✚ Greater comfort
- ✚ Moisture-proof
- ✚ Noise dampening inside and outside
- ✚ Safety
- ✚ Reduction of emissions
- ✚ Energy savings

#### Design

- ✚ Improved look
- ✚ Greater freedom in the design









# TECHNOLOGY IN MOBILE HOME PRODUCTION

Today's motorhomes and caravans need to meet the highest requirements in their design, comfort and safety, coupled with maximum individualization. Kömmerling adhesives and sealants greatly contribute to achieving these objectives.

Seeing the whole world with ease – what is called for today are economical vehicles with as little weight as possible, yet without reducing their stability. Vibrations attending their driving operation need to be reduced to a minimum.

Adhesive applications in a modern mobile home or caravan are multi-layered and also highly customized in many cases. With the right adhesive consultant by your side, solutions will be found for all relevant tasks.

KÖMMERLING's philosophy in this respect is to cater to the specific wishes and possibilities of the mobile home manufacturer and come up with adhesives that are tailored to the respective bonding process. Ever since its establishment in the year 1897, KÖMMERLING has continually set milestones in modern bonding and sealing by the development of new technologies, making it one of Europe's leading adhesive suppliers for commercial vehicles in general, and trailer construction in particular.

## APPLICATIONS



1 Sandwich Elements

3 Glazing

2 Assembly Bonding and  
Interior Finishing

# RECOMMENDED TECHNOLOGIES

## 2-component Polyurethane Reaction Adhesives | Körapur

Solvent-free, 2-component polyurethane-based reaction adhesives that will harden at room temperature for bonding a great variety of surfaces such as wood, GFRP, steel, aluminium, many plastics and hard foams based on PUR, PS or PVC.

Körapur 2-component products consist of a resin and a hardening component that are mixed at a fixed ratio, whereupon they will harden into structural or semi-structural adhesives, irrespective of the humidity, that are also particularly suitable for applications involving large surfaces.

## 1-component Polyurethane Reaction Adhesives | Körapur

Polyurethane-based 1-component reaction adhesives that will harden at room temperature for bonding and sealing a great variety of materials such as wood, GFRP, metals, as well as many plastics.

Körapur 1-component products react with moisture to form elastic adhesives and sealants that are in particular applied where different thermal length expansions require permanent compensation.

## 1-component Silane-Terminated (Polymer) Reaction Adhesives | Körapop

Solvent-free 1-component reaction adhesives that are based on silane-terminated polymers and will harden at room temperature for bonding and sealing a great variety of components such as wood, GFRP, metals as well as many plastics.

Körapop 1-component products react with moisture to form elastic adhesives and sealants that are in particular applied where different thermal length expansions require permanent compensation.

## Solvent Adhesives | Körapren and Köraplast

Solvent-containing, polychloroprene- or polyurethane-based adhesives that will harden at room temperature for gluing a great variety of different materials such as wood-based materials, steel, aluminium, textiles, plastics like PVC, leather or foams.

Solvent-based adhesives offer good wetting properties and can be easily applied with many different methods. The evaporation of the solvents helps to achieve fast initial strengths.

## Dispersion Adhesives | Köracoll

Water-based adhesives based on various polymer systems for gluing a great variety of different materials such as wood-based materials, steel, aluminium, textiles, plastics like PVC, leather or foams.

In comparison to solvent-based adhesives, dispersion adhesives are distinguished by a longer wet life. An aspect that is highly beneficial for gluing large areas.

## Butyl Sealants | Ködiplast

Solvent-containing, butyl rubber-based sealants for sealing joints, cracks and transitions in wood, metal, glass, many thermosetting plastics and other materials.

Butyl sealants show their ultimate properties immediately upon application. They are distinguished by a broad adhesion spectrum and their excellent imperviousness to water vapour. Their high weathering stability also lends them a very good anti-corrosive effect on metals.

## Silicone Sealants | Ködisil

Silicone-based sealants for sealing, filling and grouting joints, cracks and transitions in ceramics, glass, steel, aluminium, wood, thermosetting and many thermoplastic materials.

# APPLICATIONS

## SANDWICH ELEMENTS

Sandwich construction is particularly helpful for reducing the weight of motorhomes as much as possible without compromising their stability.

This involves joining various materials such as wood, metal, plastic or cutting-edge composites with a foam core to provide side walls, roofs or floors.

Conventional assembly methods such as riveting or bolting would lead to the thermal insulation being damaged by deformation or corrosion. The use of adhesives and sealants not only prevents this, but even increases the stiffness while lowering the panel weight, thus improving the insulation.

### Körapur range

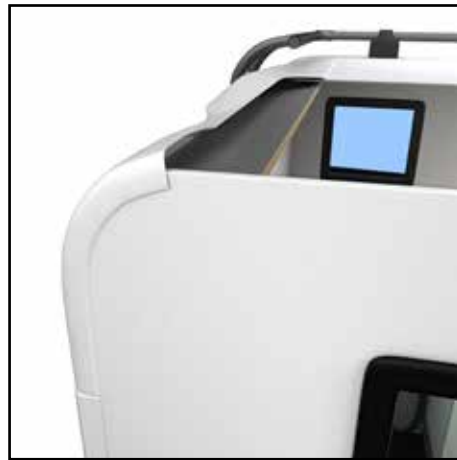
1-component polyurethane adhesive

- + Solvent free
- + Easy application
- + Broad range of open times
- + Wide adhesion range
- + Joint-filling foams

### Körapur range

2-component polyurethane adhesives

- + Broad range of consistencies from low viscosity to thixotropic formulations
- + Reaction speed individually adjustable within a broad pot life range
- + High tolerance to wood moisture contents of up to +16 %



# ASSEMBLY BONDING AND INTERIOR FINISHING

After the sandwich production side panels, front wall, rear door frame, roof and floor are joined to form a stable vehicle cabin. Reliance on the bonding technology leads to better noise damping, and thus greater driving comfort. Glued front and back masks made from plastic attachments ensure good body aerodynamics and reduce fuel consumption

This is followed by the interior construction of the mobile home. The requirements for the fastenings are as varied as the individual interior fittings. Besides protecting the floor from water ingress, this also involves the attachment of floor and wall coverings, bonding of furniture and sealing of wet cells and kitchen sinks. In the end, the vehicle's outer joints are sealed against water ingress. Living just like at home – top comfort through perfectly installed interiors.

KÖMMERLING adhesives and sealants master these tasks in the best possible way. They will safely bond the various materials, are temperature-resistant and weatherproof, compensate different linear expansions, and will keep moisture out for good. Their broad pot life range meanwhile qualifies them for manual as well as automated application.

## Körapur range

1-component polyurethane adhesive

- + Permanently elastic, vibration-damping
- + Non-ageing
- + Can be overpainted after hardening
- + Non-sagging to self-levelling formulations
- + Also applicable as 2-component products with accelerator paste

## Körapur range

2-component polyurethane adhesives

- + Hard-tough to impact-resistant types with high damping across a broad temperature range
- + Reaction speed individually adjustable within a broad pot life range
- + High stability

## Körapop range

1-component silane-terminated polymers

- + Permanently elastic, vibration-damping
- + Good ageing-, UV- and weather resistance
- + Can be overpainted wet-in-wet
- + Non-sagging to self-levelling formulations
- + Hardens with little to no shrinkage in volume
- + Also applicable as 2-component products with accelerator paste

## Köracoll range

Dispersion adhesive

- + Water-based, environmental-friendly
- + Good initial adhesion
- + Good temperature resistance
- + Usable as a contact adhesive or one-sided

## Köraplast range

Solvent-based 1-component polyurethane adhesive

- + High initial adhesion
- + Good resistance to moisture
- + Good temperature resistance
- + Applicable as a 1-component or 2-component product

## Körapren range

Solvent-based polychloroprene adhesives

- + High temperature resistance
- + High contact bonding
- + Good adhesion on many substrates
- + Quickly applied

## Ködiplast range

Butyl sealants

- + Surplus material can easily be removed
- + Ready-for-use tapes (solvent-free) with / without core
- + Highly impervious to water vapour
- + Anti-corrosive effect
- + Flexible at low temperatures

## Ködisil range

Silicone sealants

- + Neutral curing
- + Fungicidal formulation
- + Good weather and ageing resistance
- + Flexible at low temperatures
- + High UV resistance



# GLAZING

Glued windows improve the body's stability and reduce the weight. They therefore help to lower the fuel consumption, and thus protect the environment and save costs.

At the same time, KÖMMERLING window adhesives will safely protect from corrosion while dampening noise and vibrations.

## Körapur range

1-component polyurethane adhesives

- + Permanently elastic, vibration-damping
- + Non-ageing
- + Can be overpainted after hardening
- + Non-sagging to self-levelling formulations
- + Also applicable as 2-component products with accelerator paste



## Körapop-Reihe

1-component silane-terminated polymers

- + Permanently elastic, vibration-damping
- + Good ageing-, UV- and weather resistance
- + Can be overpainted wet-in-wet
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- + Hardens with little to no shrinkage in volume
- + Also applicable as 2-component products with accelerator paste



# COMPLEMENTARY PRODUCTS

## PRIMERS AND CLEANERS

The reliable adhesion of the glue on the surface of the material is a decisive factor for successful execution. To ensure this, the surface needs to be thoroughly cleaned beforehand. Apart from that, the adhesion between substrate and glue can also be optimized by the application of a primer.

For the pretreatment of metal and plastic surfaces, KÖMMERLING has developed primers and cleaners that are individually tailored to the materials to be bonded, and to the KÖMMERLING adhesives. This ensures that the products reach their greatest possible effectiveness.

### Körabond HG 74 E

- Primer for pretreating absorbent substrates such as wood, for example

### Körabond HG 77 / Körabond HG 92

- Primer for pretreating rigid PVC and ABS

### Körabond HG 81 / Körabond HG 83

- Bonding agent for pretreating painted surfaces, metals or plastics

### Körabond HG 17

- Black primer and UV protection for direct glazing, bonding agent for glass, aluminium, steel and plastics

### Körasolv WL

- Cleaner for powder-coated metals, as well as GRP

### Körasolv GL

- Cleaner for plastic, metal and glass surfaces

### Körasolv CL 17

- Cleaner / activator specifically for direct glazing; fast-drying through single application (wipe on-wipe off) with a lint-free cloth





# KÖMMERLING – YOUR SYSTEMS PARTNER

## COMPETENCE AND SERVICE

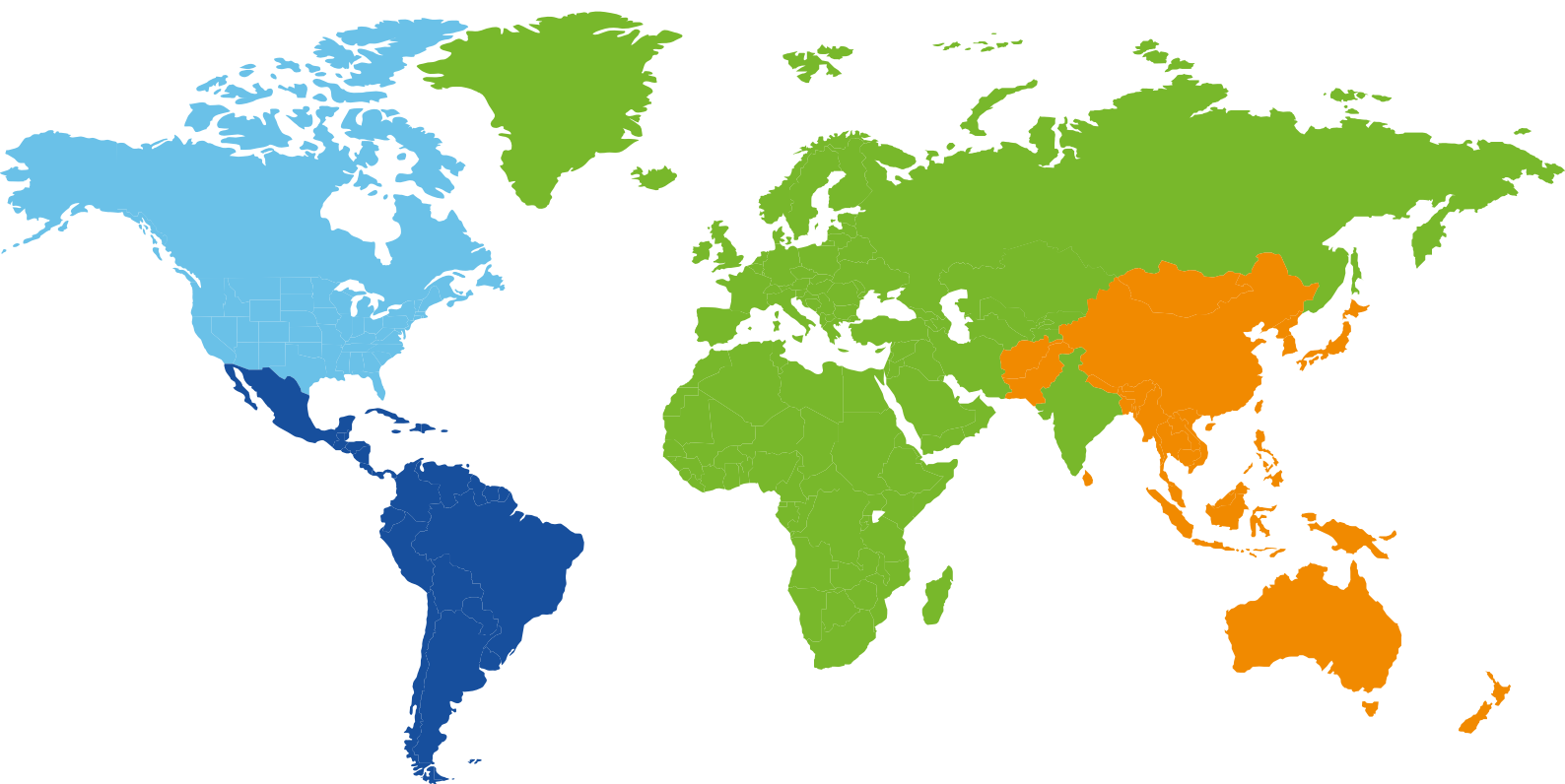
Our competent consultancy in all product selection, process and quality assurance issues is based on decades of experience gained in cooperation with the leading manufacturers of mobile homes, and offers a broad foundation for the safe use of the adhesive and sealant technology.

KÖMMERLING considers itself a system provider offering not only high-quality products, but also individual consultancy and support services which are tailored to its customers and their needs, from the project planning through to the final realization.

The top priority here is individual customer support – which will naturally also include on-site assignments. We will for example support our clients in the selection of the sealants and adhesives, in the attendant surface preparation, in the project phase, the integration of our products in their manufacturing process, and in their specific quality and production control.







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