



CARAVAN AND MOTORHOME BRIGHT IDEAS FOR RECREATIONAL VEHICLES

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BRIGHT IDEAS FOR RECREATIONAL VEHICLES

Modern caravan and motorhome users across the globe demand durable and economical vehicles with a high-quality finish. In order to meet this challenge, designers must constantly find solutions that enable manufacturers to improve their build times and manufacturing efficiency, reduce the number of parts and vehicle weight, increase rigidity and strength and extend the longevity of the product.

Sika, as the partner to the global caravan and motorhome industry, provides a wide range of state-of-the-art technologies to assist manufacturers in meeting their requirements. We provide specific solutions on our core competencies: Bonding, Sealing, Damping and Reinforcing. As a globally operating company, we are represented in your countries with own subsidiaries, ensuring first-class technical and commercial support, order handling and delivery, from the first concept through the entire life cycle of your vehicle.

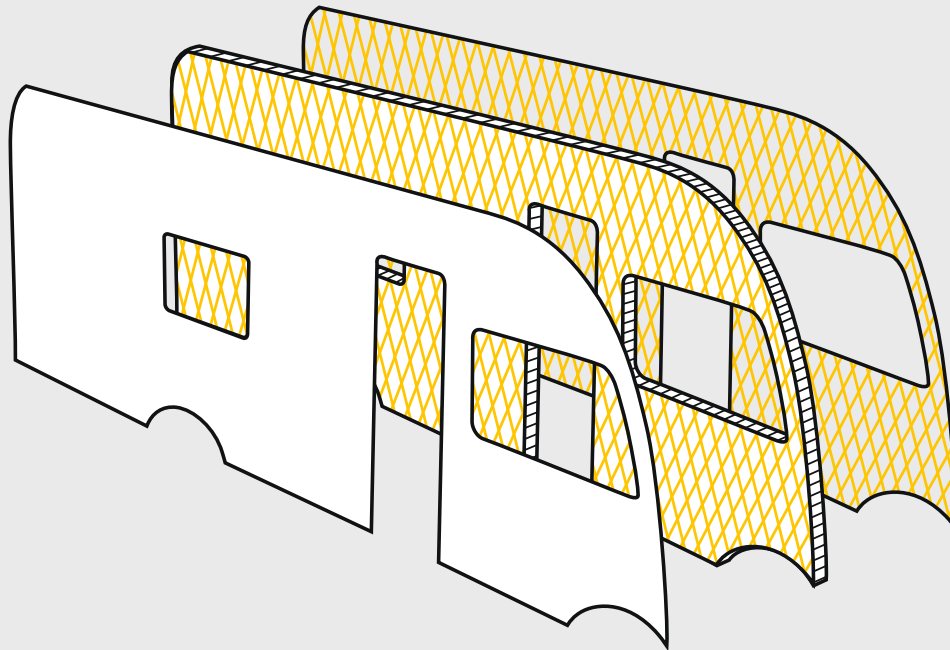


SANDWICH PANEL PRODUCTION

Caravan and motorhome manufacturers use metal, wood, fibreglass and foam insulation in the production of side and rear walls, floors and roofs. Increased efficiency in production is a critical factor for this competitive market place. Good thermal insulation, light-weight construction and high acoustic dampening are required to provide enhanced occupant comfort and better fuel economy.

Traditional fixing methods can result in buckling, deformation and denting of side and roof panels. Such issues require significant cost and labour to repair and rework. The use of adhesive bonding to fabricate the panels eliminates such risks and improves efficiency, quality and cost. Sika provides solutions custom formulated to match with different customer process requirements. For example, systems are available with a wide range of press times, green strengths, open times and other key factors to adapt to the process needs of each customer manufacturing requirements. We offer one and two-component polyurethane (PUR) technologies (SikaForce®), as well as reactive hot-melt (RHM) technology (SikaMelt®), for such applications.





WHY USE SANDWICH PANEL ADHESIVE?

- ▶ Improved structural rigidity
- ▶ Lower panel weight, resulting in reduced total vehicle running costs
- ▶ Allows the use of high-performance foam cores to enhance thermal insulation
- ▶ Excellent water resistance
- ▶ Good process control, providing consistent and repeatable high-quality output
- ▶ Flexibility of the design

TECHNOLOGICAL BENEFITS

- ▶ Bonds well to a wide variety of substrates
- ▶ Faster production due to fast strength build-up
- ▶ Compatible with manual and automatic application processes
- ▶ Custom formulation to meet customer requirements
- ▶ Full range of technologies for sandwich panel assembly, including PUR lamination, hot-melt and reactive hot-melt systems

INNOVATIVE SIKA TECHNOLOGIES

POLYURETHANE

SikaForce® 1 Component PUR adhesives which foam during curing and can be easily processed.

SikaForce® 2 Component PUR adhesive for a wide range of sandwich panels with high strength and in a range of speeds. Two-component PUR adhesive also have the possibility for heat activation to achieve very short press times.

SikaForce® 3 Component PUR adhesive solution for sandwich panels. The solution allows adjustment of curing speed, open and press times by mixing two different A-components, one fast curing and one slow curing, with a B-component. The adjustment is done manually or automatically in the workshop and allows achieving the optimal panel production speed, regardless of the workshop ambient temperature, panel complexity and variations, leading to improved productivity and increased output of up to 30%.

HOTMELT

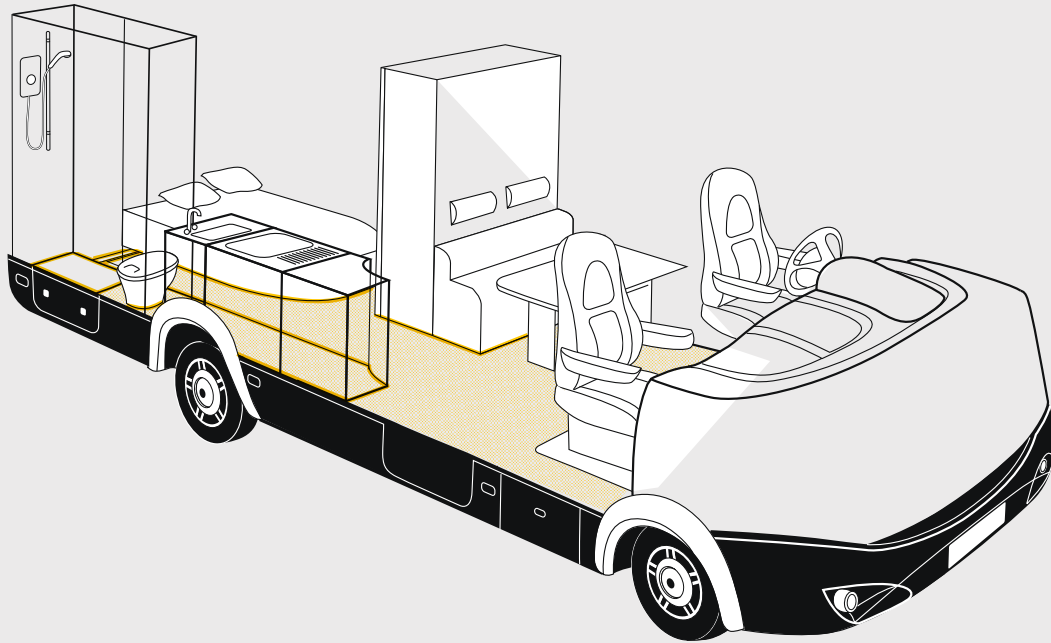
SikaMelt® reactive hot melt PUR adhesive for a range of panel lamination and with extremely fast cycle times.

GENERAL BONDING AND SEALING FOR INTERIORS

Effective sealing of the vehicle body against water ingress is essential for the elimination of expensive warranty costs and quality claims from end customers. A robust watertight seal protects wiring looms, vital electronic equipment and the entire vehicle interior. Modern vehicle interiors are expected to look stylish, attractive and inviting, and also to be finished to a very high standard. Bonded systems allow for the combination of high-performance sealing with improved aesthetics and performance.

Sika has several solutions capable of providing durable elastic sealing and high-performance adhesive bonding to many common substrates. Sikaflex® polyurethane sealants and adhesives combine simplicity of application with excellent durability and adhesion. Sikaflex® PUR-Hybrid technology (based on Sika's silane terminated polymer (STP) technology) combines the performance of traditional Sikaflex® polyurethane systems, but demonstrates additional benefits such as reduced substrate preparation and improved worker safety. SikaFast® two-component adhesives combine low surface preparation and high tensile strength with rapid de-jigging and full cure.





WHY USE GENERAL BONDING AND SEALING FOR INTERIORS?

- ▶ Watertight seals ensure durable and long-lasting protection of the interior and vital electronic equipment
- ▶ Improved acoustic environment
- ▶ Reduced air leakage: more efficient air-conditioning and heating
- ▶ Avoidance of corrosion via elimination of drilling or piercing of the chassis for mechanical fasteners
- ▶ High levels of aesthetic finish achievable

TECHNOLOGICAL BENEFITS

- ▶ Improved water and leak resistance
- ▶ Very easy to use
- ▶ Simple substrate preparation
- ▶ Good worker safety
- ▶ Wide range of standard colours available
- ▶ Excellent resistance to harsh climatic conditions

INNOVATIVE SIKA TECHNOLOGIES

Sikaflex® 200 Series one-component polyurethane technology.

Sikaflex® 500 Series one-component polyurethane / STP technology.

SikaForce® 1C, 2C and 3C polyurethane technology

SikaSil® 1C and 2C silicone adhesives and sealants

SikaFast® reactive acrylic Technology

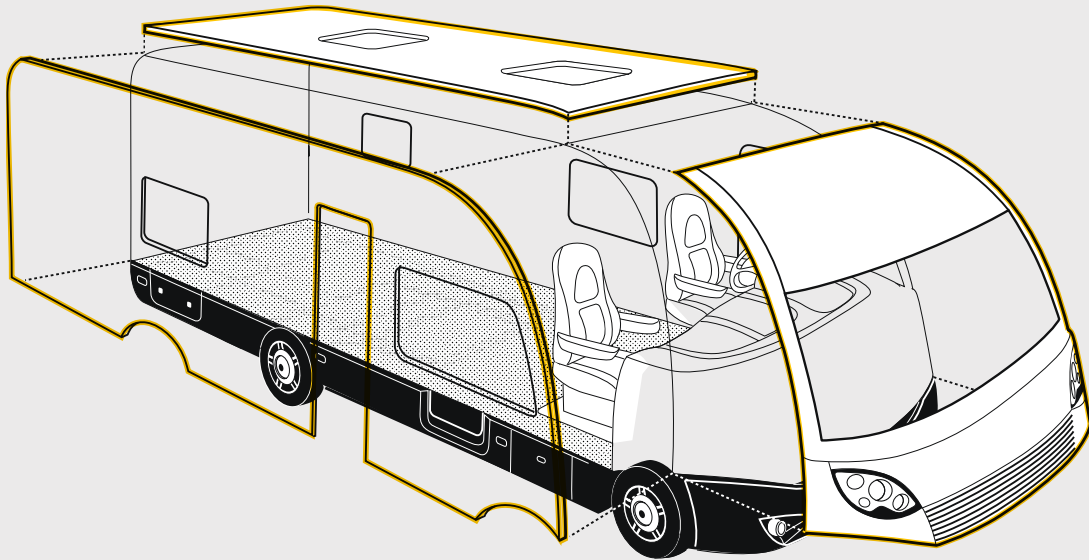


BODY ASSEMBLY AND EXTERIOR SEALING

Recent years have seen dramatic changes in the aerodynamics and styling of caravan and motorhome vehicles. The mix of materials used to fabricate such vehicles has also radically changed. The use of fibreglass composites and sandwich panel structures is now commonplace, as manufacturers seek to reduce vehicle weight, improve fuel economy and enhance thermal insulation and user comfort.

Sika can provide a range of high-performance solutions for body assembly. SikaForce® two-component PUR adhesives demonstrate high strength, good flexibility and are capable of curing at room or elevated temperatures. Sikaflex® polyurethane sealants and adhesives combine simplicity of application with excellent durability and adhesion. Sikaflex® PUR-Hybrid technology (based on Sika's silane terminated polymer (STP) technology) combines the performance of traditional Sikaflex® polyurethane systems, but demonstrates additional benefits such as reduced substrate preparation and improved worker safety. SikaFast® two-component adhesives combine low surface preparation and high tensile strength with rapid de-jigging and full cure. SikaLastomer® butyl sealants provide excellent sound damping and sealing properties.





WHY USE BODY ASSEMBLY AND EXTERIOR SEALING?

- ▶ Improved sound and vibration damping
- ▶ Enhanced aesthetics and aerodynamic efficiency
- ▶ Higher rigidity of the structure without damage to thermal insulation – unlike mechanically fastened systems
- ▶ Lower weight, generating reduced running costs
- ▶ Excellent water resistance due to elimination of holes and drilling required by mechanical fasteners
- ▶ Improved aesthetics due to no visible fixings
- ▶ Reduced risk of warpage, as adhesives compensate for different thermal expansion rates between metal and non-metal substrates
- ▶ Enhanced ability to withstand shock, impact and torsion

TECHNOLOGICAL BENEFITS

- ▶ Excellent balance of strength, flexibility and impact resistance
- ▶ Low thermal conductivity
- ▶ Excellent water resistance
- ▶ Wide range of cure speeds
- ▶ Suitable for automated or manual application
- ▶ Superb adhesion to a wide range of substrates commonly used for motorhome construction

INNOVATIVE SIKA TECHNOLOGIES

Sikaflex®
PowerCure®
SikaFast®
SikaForce®
SikaSil®

Sikaflex® 200 Series 1C polyurethane technology.

Sikaflex® 500 series 1C polyurethane / STP technology.

SikaFast® reactive acrylic Technology.

SikaForce® 1C, 2C and 3C polyurethane technology.

SikaSil® 1C and 2C silicone adhesives and sealants

PowerCure® boosted PU & STP assembly adhesive

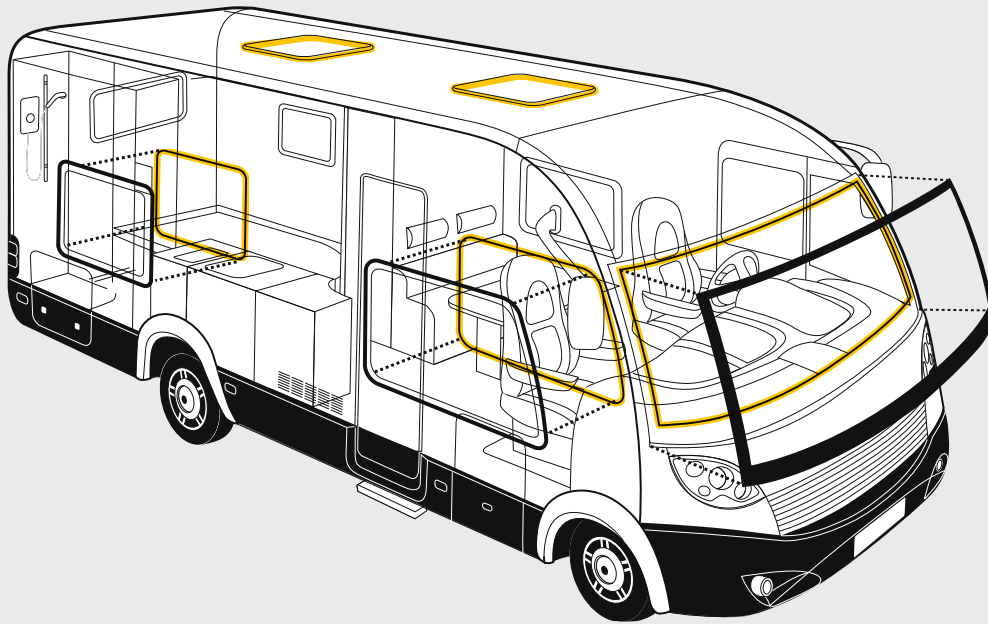


DIRECT GLAZING

For over 30 years, Sika has been providing bus and coach assembly lines with adhesives and joint sealants for direct glazing applications. The solutions vary from standard products to innovative systems with high initial strength and accelerated curing speed.

Sika offers a wide range of adhesives to suit various needs for direct glazing applications. Sikaflex® materials are capable of retaining glass in position following installation, allowing for elimination of secondary clips, fixings or tape. Our products can also contain low electrically conductive properties for elimination of galvanic corrosion/antenna signal loss. The Sikaflex® Booster and PowerCure range offers ultimate solutions for OEM's seeking excellent mechanical properties with the shortest possible full cure time and provides the opportunity to have the same system accelerated from line application to repair





WHY DIRECT GLAZE?

- ▶ Increased body stiffness for enhanced roll-over strength and improved occupant impact protection
- ▶ Enhanced aerodynamics versus glazed gasket systems to improve fuel economy and vehicle emissions
- ▶ Higher body stiffness to reduce noise, vibration and harshness within the vehicle body
- ▶ Reduction of leakages compared to rubber gasket sealed windows

TECHNOLOGICAL BENEFITS

- ▶ Sika's tried and tested primerless to glass technology
- ▶ Primerless to paint
- ▶ Accelerated with Sika® Booster for rapid full cure
- ▶ High initial green strength
- ▶ Hot and warm applied systems to eliminate secondary clips, fixings and tape

INNOVATIVE SIKA TECHNOLOGIES

Sikaflex® 200 Series 1C polyurethane technology.

Sikaflex® 500 series 1C polyurethane / STP technology

SikaSil® 1C and 2C silicone adhesives and sealants

SikaTack® 1C polyurethane technology allowing quicker safe drive away times.

Sika PowerCure® Fast curing direct glazing adhesive system for line operations and small accelerated applications and repair

SikaSil® 1C and 2C silicone adhesives and sealants



GLOBAL BUT LOCAL PARTNERSHIPS



FOR MORE INFORMATION

sika.com.au

Our most current General Sales Conditions shall apply. Please consult the most current local Product Data Sheet prior to any use.



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