

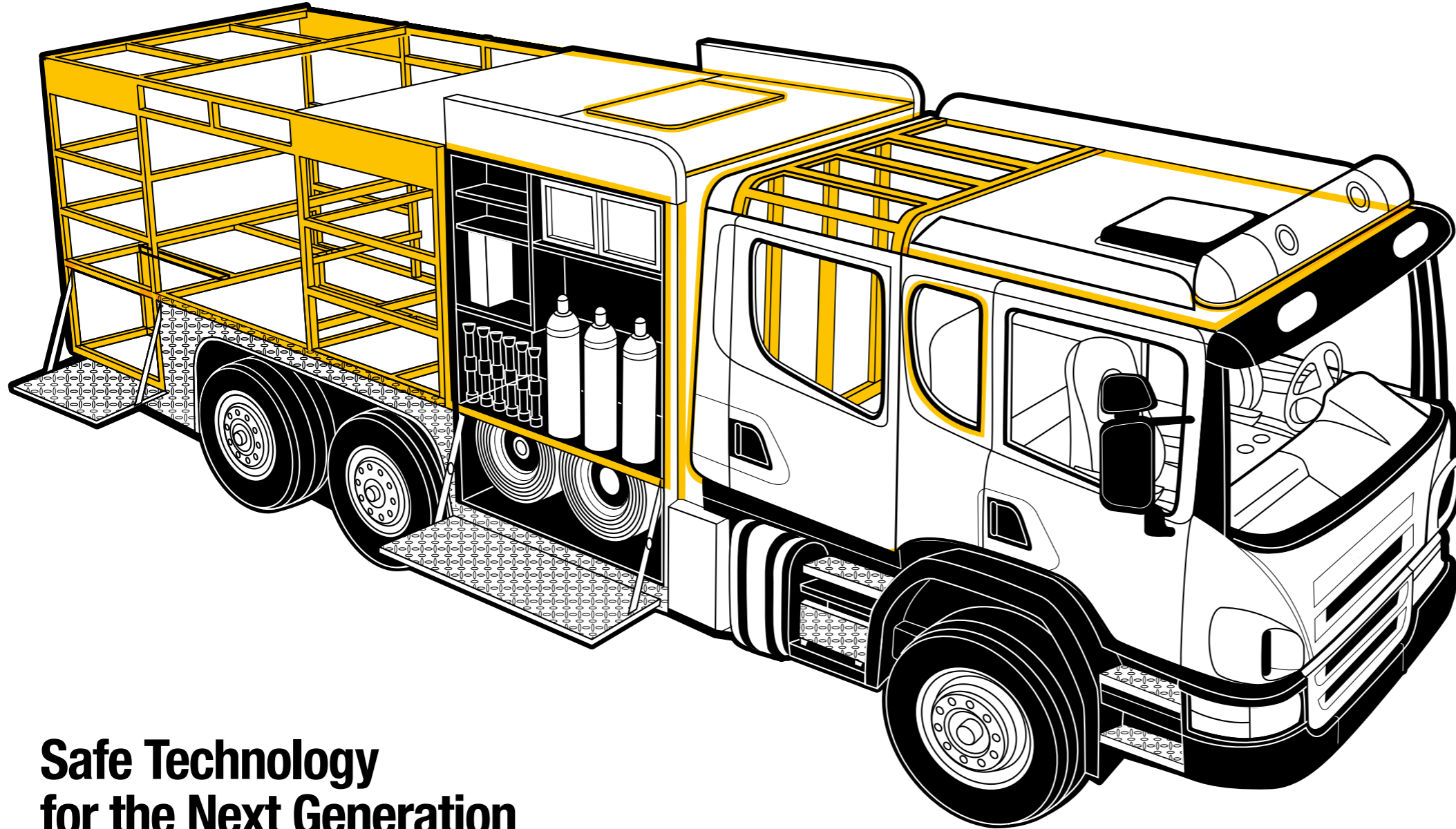
**Industry**



## **Emergency Vehicles**

### **Safe Technology for the Next Generation**

**Sika**®

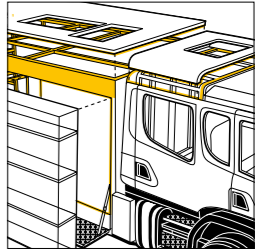


## Safe Technology for the Next Generation

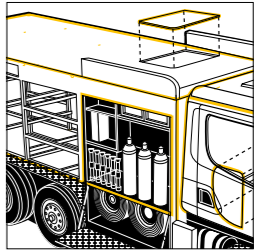
Emergency vehicle users across the globe demand safe, robust and secure vehicles with the possibility for a higher payload. In order to meet this challenge, designers must constantly find solutions that enable manufacturers to improve their build times and manufacturing efficiency, reduce the number of parts and vehicle weight, increase rigidity and strength and extend the longevity of the product.

Sika, as the partner to the global emergency vehicle 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.

## Content

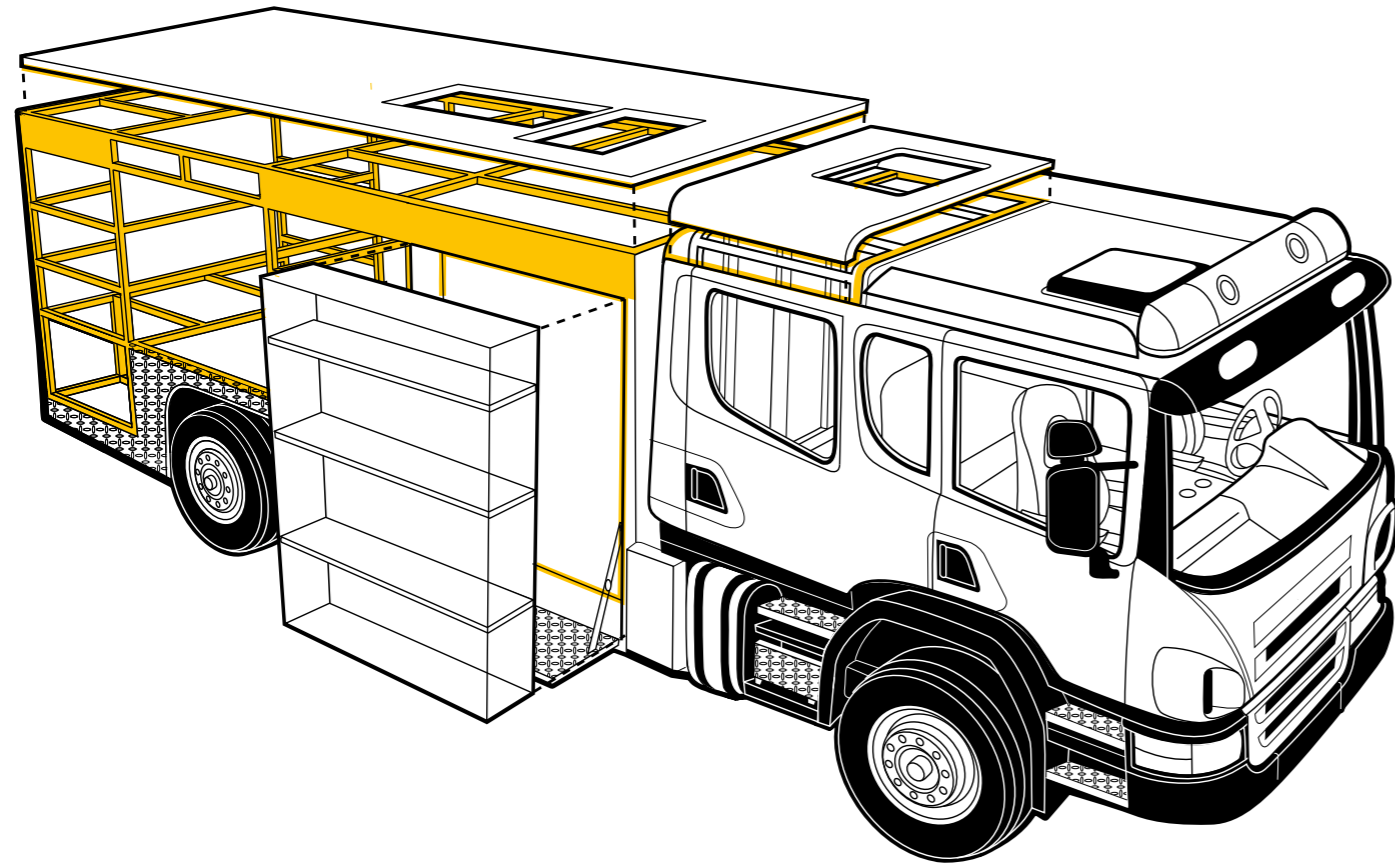


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# Structural Bonding and Assembly



Recent years have seen changes in combination of materials used to fabricate emergency vehicles. The use of aluminium and fibreglass composites is now commonplace, as manufacturers seek to reduce vehicle weight while still providing robust and secure vehicles.

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 to increase curing speed. 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.



Application of the adhesive for roof panel bonding

### Why Use Structural and Assembly Adhesives?

- Improved rigidity of the structure
- Lower vehicle weight, enable to increase payload
- Excellent water resistance due to elimination of holes and drilling required by mechanical fasteners
- Withstands high dynamic stresses
- Bonded assemblies are able to withstand high dynamic stresses

### Technological Benefits

- Bonds well to a wide variety of substrates
- Excellent balance of strength, flexibility and impact resistance
- Eliminates mechanical fixation
- Improved water and leak resistance
- A range of applications from manual to automatic
- Overpaintable

### Best Recommended Sika Products

#### Features and Benefits

#### Sikaflex® -228

Self-levelling, low-viscous, one-component polyurethane adhesive for panel bonding

#### Sikaflex® -252

Structural assembly adhesive for flexible joints subjected to dynamic stresses

#### Sikaflex®-254 Booster

Fast curing; 'fail-safe' systems cures even in the absence of Sika® Booster Paste; good mechanical properties and adhesion

#### Sikaflex® -552

UV-stable assembly adhesive for sealing and bonding, excellent adhesion properties, ecology friendly; suitable also for exterior joints

#### SikaFast®-3000 Series

High tensile properties, elasticity and impact resistance; excellent adhesion profile; gap-filling capability

#### SikaFast®-5000 Series

High mechanical properties; fast curing with long open times; excellent adhesion profile; low odour

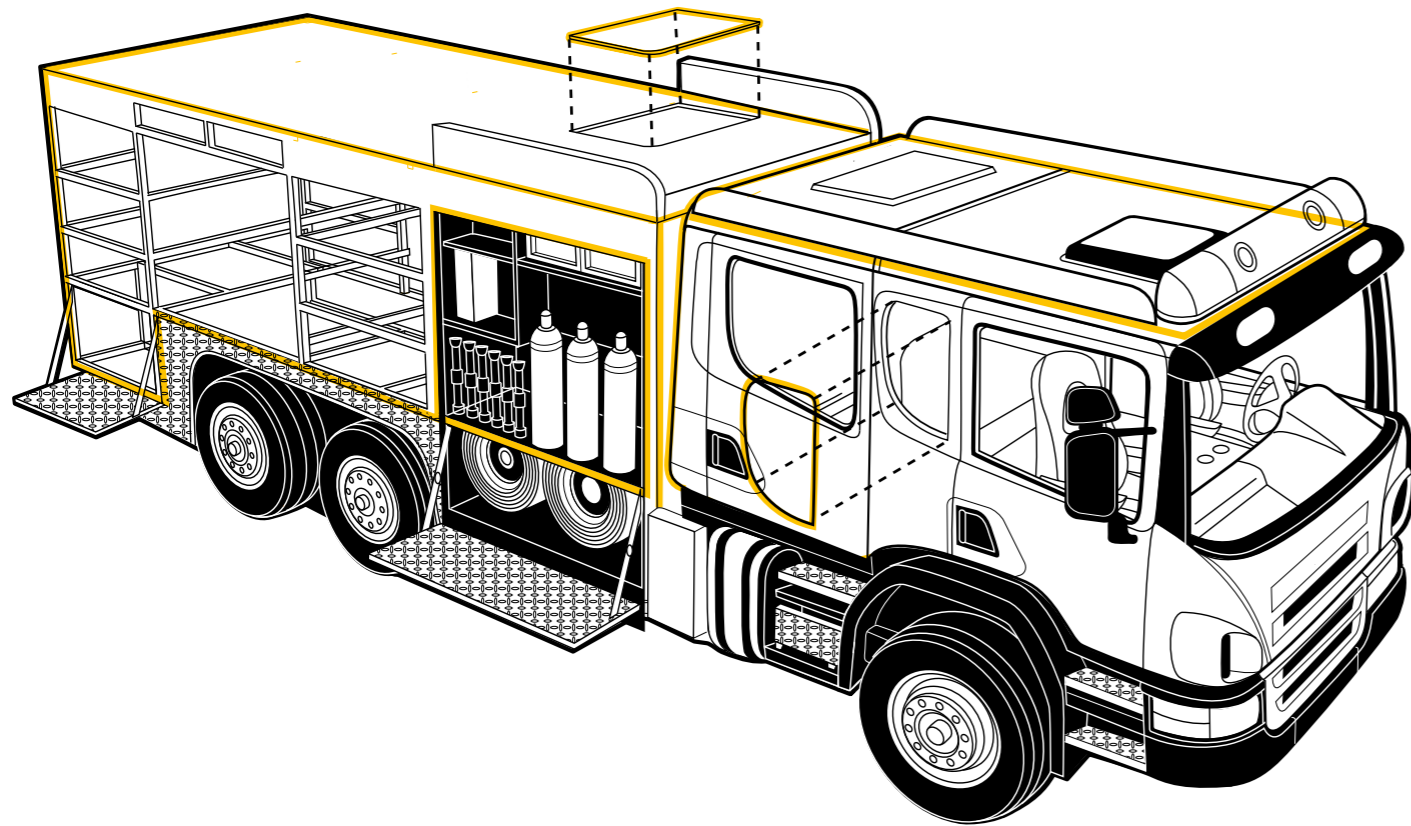
#### SikaForce®-7550

Two-Component, high-strength elastic assembly adhesive



Bonding of the side wall on a aluminium structure

# Direct Glazing and Sealing



For over 20 years, Sika has been providing emergency vehicles, bus and coach, automotive, truck and rail OEM assembly lines with adhesive and sealant solutions for sealing and direct glazing. Primerless, manual and automated pre-treatment options are available to fit the needs of a variety of OEM application processes in order to create significant cost savings and manufacturing process simplification.

Sika offers a wide range of adhesive and sealant technologies to suit all direct glazing and sealing applications. Specific Sikaflex® solutions are available to suit cold, warm and hot application processes. Proprietary Sikaflex® materials are capable of retaining the glass in position following installation, allowing for elimination of secondary clips, fixings and tape. Sikaflex® materials can also provide low electrically conductive properties for elimination of galvanic corrosion. The SikaTack®-Plus Booster range provides the ultimate solution for OEM's seeking excellent mechanical properties with the shortest possible full cure time. Unlike traditional two-component systems, this boosted one-component system has the significant benefit of full material cure irrespective of the presence of the accelerator paste, providing enhanced process/quality consistency and security. Sikaflex® PUR-Hybrid technology (STP-technology) combines the performance of traditional Sikaflex® polyurethane systems, but shows additional characteristics such as reduced substrate surface preparation and improved ecological benefits.



Sealing of the floor to the sidewall



Sealed roof panel

## 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

## Why Seal?

- Improved acoustic environment (lower noise)
- Watertight seals ensure protection of vital electronic equipment
- More efficient air-conditioning and heating
- Watertight seals ensure durable and long-lasting protection

## 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
- Elimination of water intrusion and leakage
- Simple substrate preparation, very easy to use
- High levels of aesthetic finish achievable
- Excellent resistance to harsh climatic conditions

## Best Recommended Sika Products

Features and Benefits

### Sikaflex®-221

High-quality multi-purpose sealant and adhesive, suitable for making permanent elastic seals of high adhesive strength

### Sikaflex®-222 UV

UV-resistant, ideal for use with organic glass or open joints; easy application; suitable for bonding and sealing; compatible with PC (polycarbonate) and PMMA (polymethylmetacrylate) with proprietary Sika surface preparation system; high elasticity and low modulus

### Sikaflex®-250 PC

Warm applied system; high green strength enables reduction in clips, fixings and tape; good tooling behaviour; widely OEM-approved; excellent adhesion characteristics

### Sikaflex®-265

Extremely easy to use; suitable for bonding and sealing; large gap-filling capabilities; excellent aesthetics with a smooth surface finish; long open time; UV-stable

### Sikaflex®-521 UV

Joint sealant with excellent UV, ageing and weather resistance, reduced substrate surface preparation needed. Solvent and VOC-free

### Sikaflex®-555

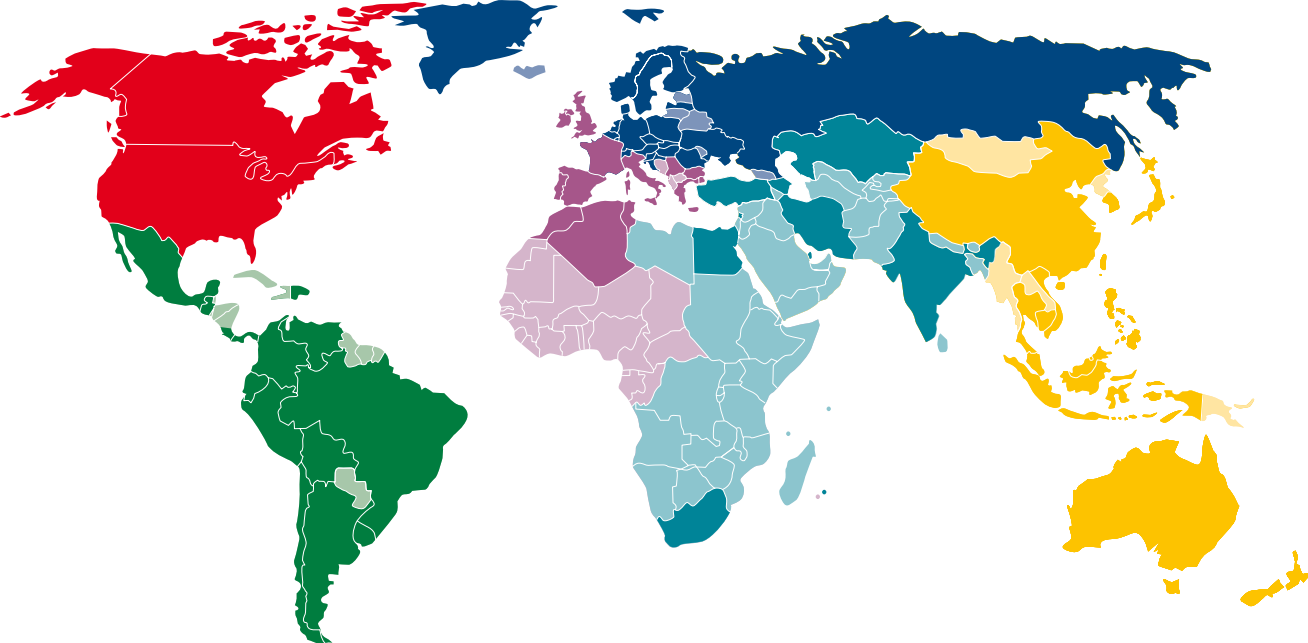
STP direct glazing adhesive and sealant. Suitable also for open joints

### SikaTack®-Plus Booster

Fast curing; 'fail-safe' systems cures even in the absence of Sika® Booster Paste; good mechanical properties and adhesion



# Sika Worldwide



- 5 continents
- over 70 countries
- 90 production and marketing companies
- approx. 12,000 employees



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

[www.sika.com](http://www.sika.com)

