



# SikaSeal®

## SEALANTS FOR NEW CONSTRUCTION AND RENOVATION OF RESIDENTIAL BUILDINGS

BUILDING TRUST





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# JOINT AND CRACK SEALANTS

**JOINTS CAN BE FOUND IN MANY PLACES IN BUILDINGS, AMONG OTHERS BETWEEN WINDOW FRAMES AND MASONRY, BETWEEN FLOOR AND WALL OR BETWEEN SINK AND WALL.**

Elastic and plastic sealants are used to seal these joints or even cracks. These sealants serve different purposes depending on the type of joint and its location and are essential for the quality of the building and its longevity. They:

- Prevent passage of media (air, water, chemicals, smoke, etc.)
- Provide thermal and sound insulation
- Enhance the visual appearance of the construction, and/or
- Seal cracks before they are painted over

## IMPORTANT PROPERTIES OF SEALANTS IN RESIDENTIAL CONSTRUCTION

There are two basic requirements for sealants that are crucial for aesthetics and functionality. First, sealants must be easy to work with, so that the quality of the seal is assured, and applicators can apply the products at high speed without rework. Second, their properties, such as adhesion to substrates, movement capability, resilience, fungal resistance, etc., must be matched to the specific requirements.

Sika places great emphasis on application properties when developing sealants. For example, SikaSeal® sealants, which are used in relatively wide vertical façade joints, have a high level of sag resistance and sufficient "body" to be easily smoothed. Another important property that distinguishes SikaSeal® products from competitors is the short thread break, which avoids contamination of adjacent surfaces.

Sika sealants are also optimized in terms of their adhesion to substrates commonly used for a particular application. For example, a sealant such as SikaSeal®-171 Glass Seal, which is advertised for glazing, must not only bond excellently to flat glass, but also to various metal surfaces.

A sealant used in roofing, such as SikaSeal®-173 Roof Seal, must be compatible with and adhere to bituminous roofing felt.

Many properties of high-quality sealants, such as movement capability or emissions (indoor air quality), can be externally certified by accredited testing institutes. References to these certifications and approvals can be found either directly on the packaging of SikaSeal® or in the product data sheet.



# TYPES OF RESIDENTIAL SEALANTS

Sealants used for housing construction can be basically divided into elastic sealants and plastic sealants. Plastic sealants have no or only very low resilience and can therefore only be used in joints (or cracks) where little movement occurs. Typical representatives of plastic sealants are simple, water-based acrylics. Elastic sealants, on the other hand, can change their existing profile in the joint due to external influences and return to their original shape after the external force is removed (resilience). Elastic sealants can therefore also absorb larger movements in a joint with correct joint design and suitable movement capability without compromising the tightness of the joint. Typical representatives of this group are moisture-curing silicones.

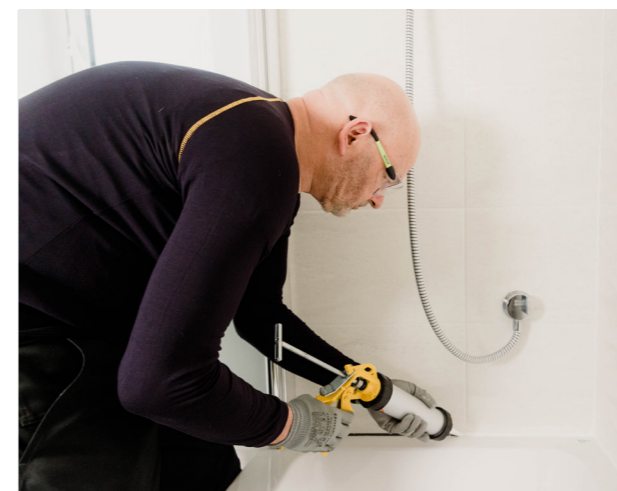
## SILICONE SEALANTS

Silicones are widely used in façade applications and wet rooms. Silicone sealants are characterized by their durability, high UV, temperature resistance and good adhesion to many substrates. However, they cannot be painted over or even be in contact with paints in the edge area of the joint because it can lead to undesirable flow disturbances in the paint coat.

A distinction can be made between neutral-crosslinking and acid-crosslinking silicone sealants. The latter release gaseous acetic acid

when cured with atmospheric moisture, which leads to the well-known vinegar odour during their application. These so-called acetoxycuring silicone sealants have been on the market for more than 50 years and are still widely used today for sealing connecting joints in bathrooms, for glazing and for many other applications. However, due to the nature of the acetic acid released during curing, they are not suitable for alkaline substrates (e. g. concrete) or for sensitive metals (risk of rust formation). They also often do not adhere sufficiently to plastics.

The two main types of neutral silicone sealants are oxime-curing and alkoxy-curing. Oxime-curing grades adhere excellently to many building substrates but have a very strong and penetrating odour that often prohibits their use indoors. Alkoxy-curing silicone sealants, on the other hand, have only a very faint or no odour at all during the curing process. They also have the best compatibility with all building substrates and can be used, for example, on plastics that are prone to stress corrosion cracking, such as polycarbonate (PC) or polymethyl methacrylate (PMMA).



In the last 20 to 25 years, many cheap silicone sealants have come onto the market, which have unfortunately done great damage to the image of the product group. In most of these products, the high-quality silicone plasticizer is wholly or partially replaced by an inexpensive hydrocarbon. However, this not only affects the cost, but also primarily the quality and properties. Such so-called extended silicones show a very high volume shrinkage. The products start to become brittle after only a few weeks and sooner or later fail completely, ultimately increasing the overall costs. The use of such products is discouraged and SikaSeal® silicone sealants should be used instead.

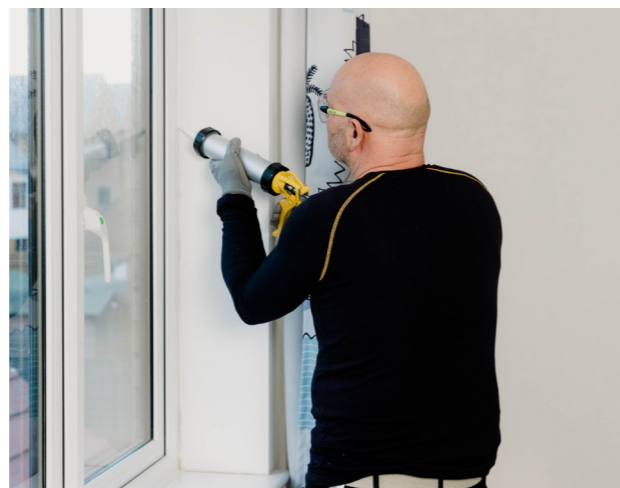
#### ACRYLIC SEALANTS

Today, acrylic sealants are predominantly water-based and are therefore also generally referred to as dispersion sealants. They are usually non-reactive and the finished sealant is formed by drying, i.e.: evaporation of the water. Compared to non-extended silicone sealants, such acrylic sealants therefore exhibit high volume shrinkage and are mainly used for narrow joints or cracks where little movement is expected. Typical applications include connection joints between built-in furniture and walls and the sealing of plaster cracks in walls before painting.



#### HYBRID SEALANTS

Hybrid sealants are usually elastic or plasto-elastic, moisture-curing products based on silane-terminated polymers. There are two chemistries typically encountered: silane-terminated polyurethanes and silane-terminated polyethers, the latter often colloquially referred to as modified silicones for marketing reasons. However, modified silicones have nothing in common with silicones apart from the crosslinking mechanism. They have a significantly poorer resilience than silicones and by far do not achieve their weathering and UV stability. Hybrid sealants are often used for sealing window connection joints.



#### OTHER TYPES OF SEALANTS

Polyurethane sealants, marketed by Sika under the brand name Sikaflex®, are another class of elastic, moisture curing products. They can also be used in residential construction but are mostly used in applications with higher technical requirements, such as facades of commercial or high-rise buildings, and for floor joints, where their good mechanical properties, toughness and durability come into play.

Bituminous sealants are ready to use and easily applied cold. They do not change after processing. They show immediate impermeability to water. Bituminous sealants build up excellent and fast adhesion to various substrates, even to damp surfaces.

PRODUCTS



# OVERVIEW FOR PRODUCT SELECTION

## PRODUCT CHARACTERISTICS

Product	SikaSeal®-170	SikaSeal®-171	SikaSeal®-173	SikaSeal®-174
Description	All Purpose	Glass Seal	Roof Seal	Construction
Technology	Acetic silicone	Acetic silicone	Bitumen	Neutral silicone
Weather resistance	■■■	■■■	■■■	■■■
Exterior use	■■■	■■■	■■■	■■■
Elasticity and flexibility	■■	■■	■■■	■■■
Non-corrosive	○	○	■■■	■■■
Over-paintability	○	○	○	○
Environmental / VOC emmision certifications	EC1	EC1	○	EC1 <sup>PLUS</sup>
CE Marking	F EXT INT CC 12.5E S XS1	F EXT INT CC 12.5E G CC		F EXT INT CC 25LM G CC 25LM S XS1
Colours	Transparent, white	Transparent, white	Black	Anthracite, ash, black, brown, concrete grey, light grey, transparent, transparent grey and white

## MATERIALS

Product	SikaSeal®-170	SikaSeal®-171	SikaSeal®-173	SikaSeal®-174
Aluminum	■■	■■	■■	■■■
Bitumen / asphalt	○	○	■■■	○
Brick / clinker	■	■	■■	■■■
Ceramic tiles	■■■	■■■	○	■■■
Concrete	○	○	■■■	■■■
Plasterboard	○	○	○	○
Galvanized steel	○	○	■■	■■■
Glass	■■■	■■■		■■■
Plastic	○	○	○	■■
Stainless steel	○	○	■■	■■■
Wood			■■■	■■

- Unsuitable
- Sufficient
- Good
- Excellent

## PRODUCT CHARACTERISTICS

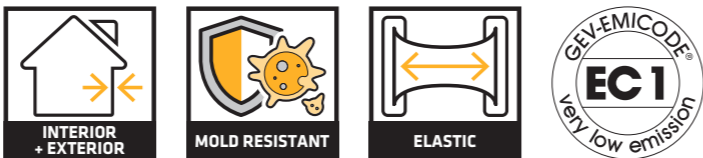
SikaSeal®-175	SikaSeal®-176	SikaSeal®-177	SikaSeal®-178	Product
Bath & Tiles	Masonry	Wall Repair	Interior	Description
Neutral silicone	Acrylate	Acrylate	Acrylate	Technology
■■■	■■	■	■	Weather resistance
■■■	■■	■	○	Exterior use
■■■	■	■	■	Elasticity and flexibility
■■■	■■■	■■■	■■■	Non-corrosive
○	■■■	■■■	■■■	Over-paintability
EC1 <sup>PLUS</sup>	EC1 <sup>PLUS</sup> Phthalate-free	EC1 <sup>PLUS</sup> Phthalate-free	EC1 <sup>PLUS</sup>	Environmental / VOC emmision certifications
S XS1	F EXT-INT 12.5P	F EXT-INT 7.5P	F INT	CE Marking
Anthracite, ash, bahama beige, dark grey, elite brown, elite grey, graphite, havana, jasmin, jura beige, manhattan, platin, sand grey, silver grey, transparent and white	White	White	White	Colours

## MATERIALS

SikaSeal®-175	SikaSeal®-176	SikaSeal®-177	SikaSeal®-178	Product
■■■	■■	■■	■	Aluminum
○	○	○	○	Bitumen / asphalt
■■■	■■■	■■■	■■■	Brick / clinker
■■■	■■	■	○	Ceramic tiles
■■■	■■	■■	■■	Concrete
○	■■■	■■■	■■■	Plasterboard
■■■	■	■	○	Galvanized steel
■■■	○	○	○	Glass
■■	○	○	○	Plastic
■■■	○	○	○	Stainless steel
■■	■■■	■■■	■■■	Wood

# PRODUCTS

## SikaSeal®-170 All Purpose



Acetoxy silicone for sealing exterior and interior connection joints, wet rooms and other areas of residential homes. It cures to form an airtight and waterproof elastic seal that is resistant to UV and weathering. SikaSeal®-170 can be used on many construction materials and substrates such as aluminum, glass and ceramic. It contains fungicide to protect the sealant for mold growth in humid areas.

### EXAMPLES OF USE

Sealing on sanitary areas around bathtubs, showers or sinks, domestic kitchens, sealing of connection and expansion joints.



### BENEFITS / CHARACTERISTICS

- Low VOC emissions
- Very good resistance to UV exposure and weathering
- Movement capability  $\pm 20\%$
- Resistant to temperatures between  $-40^{\circ}\text{C}$  to  $+100^{\circ}\text{C}$

### APPROVALS / CERTIFICATES

- GEV Ecode EC1
- CE marking: EN 15651-1, EN 15651-3

### PACKAGING

300 ml CTR, 12 CTR / box

### COLORS

White, transparent



## SikaSeal®-171 Glass Seal



Acetoxy silicone for interior and exterior glazing applications of residential homes. It cures to form an airtight and waterproof elastic seal that is resistant to UV and weathering. SikaSeal®-171 has very good adhesion without a primer on many construction materials and substrates such as aluminum, glass, ceramic. It contains fungicide to protect the sealant for mold growth in humid areas.

### EXAMPLES OF USE

Sealing glass to frame on greenhouses, winter garden and skylights, sealing glass on humid areas in residential homes, or interior decoration with glass walls.



### BENEFITS / CHARACTERISTICS

- Low VOC emissions
- Very good resistance to UV exposure and weathering
- Movement capability  $\pm 20\%$
- Resistant to temperatures between  $-40^{\circ}\text{C}$  to  $+100^{\circ}\text{C}$

### APPROVALS / CERTIFICATES

- GEV Ecode EC1
- CE marking: EN 15651-1, EN 15651-2

### PACKAGING

300 ml CTR, 12 CTR / box

### COLORS

White, transparent



# PRODUCTS

## SikaSeal®-173 Roof Seal



Premium quality sealant and adhesive based on modified bitumen. It provides an instant and weatherproof seal for a wide variety of roofing applications. SikaSeal®-173 has very good adhesion without a primer on most materials used on roofing application such as bitumen, metal, concrete or wood, on dry but also wet surfaces. After curing, it remains soft and flexible, and is resistant to very high temperatures, UV and harsh weather conditions.

### EXAMPLES OF USE

Weatherproofing in roof sheeting, sealing of gutters, chimney flashing and downpipes, repairing of cracks, holes, and fixing roof felts.

### PACKAGING

300 ml CTR, 12 CTR / box

### COLORS

Black

### BENEFITS / CHARACTERISTICS

- Very good adhesion to wet surfaces
- Fiber reinforced
- Very good adhesion to bituminous surfaces and also on metal, wood or concrete
- Very good resistance to UV exposure and weathering



## SikaSeal®-174 Construction



High quality neutral alkoxy silicone for perimeter sealing of windows and doors, connection and façade joints. SikaSeal®-174 has very good adhesion without a primer on most construction materials and substrates such as glass, ceramic and tiles, clinker, aluminum, steel and wood. It contains fungicide to protect the sealant for mold growth in humid areas such as bathrooms and showers.

### EXAMPLES OF USE

Sealing of window and door frames, windowsills, sealing joints in sanitary facilities around bathtubs, toilets or sinks, sealing glass to frame on greenhouses, winter garden and skylights, or sealing joints on interior glass wall decoration.

### APPROVALS / CERTIFICATES

- GEV Emission EC1<sup>Plus</sup>
- CE marking: EN 15651-1, EN 15651-2, EN-15651-3

### PACKAGING

300 ml CTR, 12 CTR / box

### COLORS

Anthracite, ash, black, brown, concrete grey, light grey, transparent, transparent grey, white

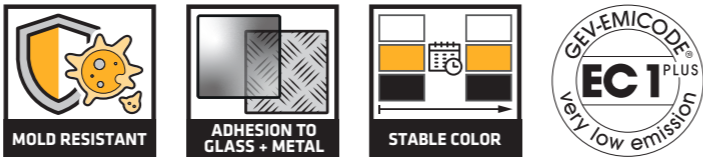
### BENEFITS / CHARACTERISTICS

- Very low VOC emissions
- Very good resistance to UV exposure and weathering
- Very good elasticity and flexibility:  $\pm 25\%$
- Non-corrosive, no odor
- Resistant to temperatures between  $-40^{\circ}\text{C}$  to  $+100^{\circ}\text{C}$



# PRODUCTS

## SikaSeal®-175 Bath & Tiles



High quality neutral alkoxy silicone designed for sealing joints in bathrooms, showers and other humid areas. It contains special fungicide for use in applications which require long term resistance to mold growth. SikaSeal®-175 has very good adhesion without a primer on most construction materials and substrates such as glass, ceramic and tiles, clinker, aluminum, steel and wood.

### EXAMPLES OF USE

Sealing joints in sanitary facilities around bathtubs, showers, toilets and sinks, joints in domestic kitchens.

### APPROVALS / CERTIFICATES

- GEV Emission EC1 <sup>PLUS</sup>
- CE marking: EN 15651-3

### PACKAGING

300 ml CTR, 12 CTR / box

### COLORS

Anthracite, ash, bahama beige, dark grey, elite brown, elite grey, graphite, havana, jasmin, jura beige, manhattan, platin, sand grey, silver grey, transparent, white



## SikaSeal®-176 Masonry



High performance over-paintable sealant free of solvents and phthalates for sealing low movement and connection joints in exterior and interior applications. It can be painted over with most water-based paints. SikaSeal®-176 has very good adhesion without a primer on construction materials and substrates such as concrete, brick, plastered surfaces, plasterboard, aluminum or wood.

### EXAMPLES OF USE

Sealing interior and exterior connection joints, sealing interior window frames, door frames and windowsills, sealing joints between wall and ceiling, sealing joints in lightweight walls; filling holes and cracks on walls.

### APPROVALS / CERTIFICATES

- Over-paintable
- Easy to apply, tool and clean with water
- Very low emissions, free of solvents and phthalates
- Very good resistance to UV exposure
- Movement capability  $\pm 12.5\%$
- Can be stored at temperatures down to  $-10^{\circ}\text{C}$  for a limited time (up to 24h), e.g.: for transport or storage

### APPROVALS / CERTIFICATES

- GEV Emission EC1 <sup>PLUS</sup>
- CE marking: EN 15651-1

### PACKAGING

300 ml CTR, 12 CTR / box

### COLORS

White



# PRODUCTS

## SikaSeal®-177 Wall Repair



Over-paintable acrylic sealant free of solvents and phthalates for sealing interior joints or repair wall cracks. It can be painted over with most water-based paints. It can prevent further cracking or adhesion loss in case of low movement occurs. SikaSeal®-177 has very good adhesion without a primer on construction materials and substrates such as concrete, brick, plastered surfaces, plasterboard, aluminum or wood.

### EXAMPLES OF USE

Sealing windowsills, door frames, lightweight walls, ceiling joints with low movement, filling holes and repair of cracks on walls.

### APPROVALS / CERTIFICATES

- GEV Eimcode EC1 <sup>PLUS</sup>
- CE marking: EN 15651-1

### PACKAGING

300 ml CTR, 12 CTR / box

### COLORS

White

### BENEFITS / CHARACTERISTICS

- Over-paintable
- Easy to apply, tool and clean with water
- Very low emissions, free of solvents and phthalates
- Movement capability  $\pm 7.5\%$
- Can be stored at temperatures down to  $-10^{\circ}\text{C}$  for a limited time (up to 24h), i.e.: for transport or storage



## SikaSeal®-178 Interior



Over-paintable acrylic sealant for repair and filling cracks on interior walls. It can be painted over with most water-based paints. SikaSeal®-178 has very good adhesion without a primer on construction materials and substrates such as concrete, brick, plastered surfaces, plasterboard, aluminum or wood.

### EXAMPLES OF USE

Filling holes and repair of cracks on walls.

### APPROVALS / CERTIFICATES

- GEV Eimcode EC1 <sup>Plus</sup>
- CE marking: EN 15651-1

### PACKAGING

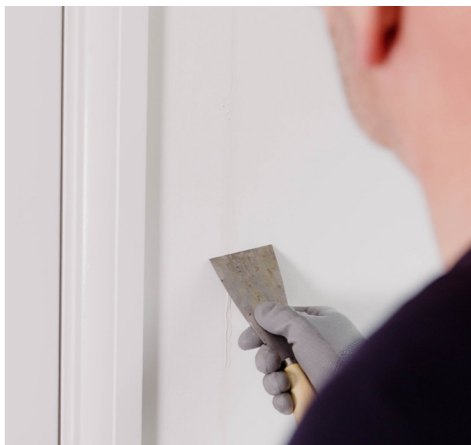
300 ml CTR, 12 CTR / box

### COLORS

White

### BENEFITS / CHARACTERISTICS

- Over-paintable
- Easy to apply, tool and clean with water
- Very low emissions
- Movement capability  $\pm 7.5\%$
- Can be stored at temperatures down to  $-10^{\circ}\text{C}$  for a limited time (up to 24h), i.e.: for transport or storage



# SIKASEAL® CONSTRUCTION SEALANTS – MORE PERFORMANCE AND LESS EXPOSURE

**SIKA HAS OVER 100 YEARS OF HISTORY IN CONSTRUCTION. AS THE LEADING BRAND FOR PROFESSIONAL APPLICATORS, WE KNOW THAT QUALITY AND PERFORMANCE ARE ESSENTIAL INGREDIENTS FOR SUSTAINABLE BUSINESS.** The SikaSeal® construction sealant range consists of high-quality products that ensure reliable and durable solutions in your home. Durability is what makes our products sustainable, based on products that are performant, high quality and easy to apply. We are known for this and proud of it.

People spend more than 80% of their time in indoor environments, in their homes, in offices, in retail, leisure or education facilities. There are various governmental and industry initiatives around the globe to reduce VOC (Volatile Organic Compounds) emissions from building materials and improve indoor air quality. VOCs have been identified as having potential long term health impacts and an adverse effect on the environment.

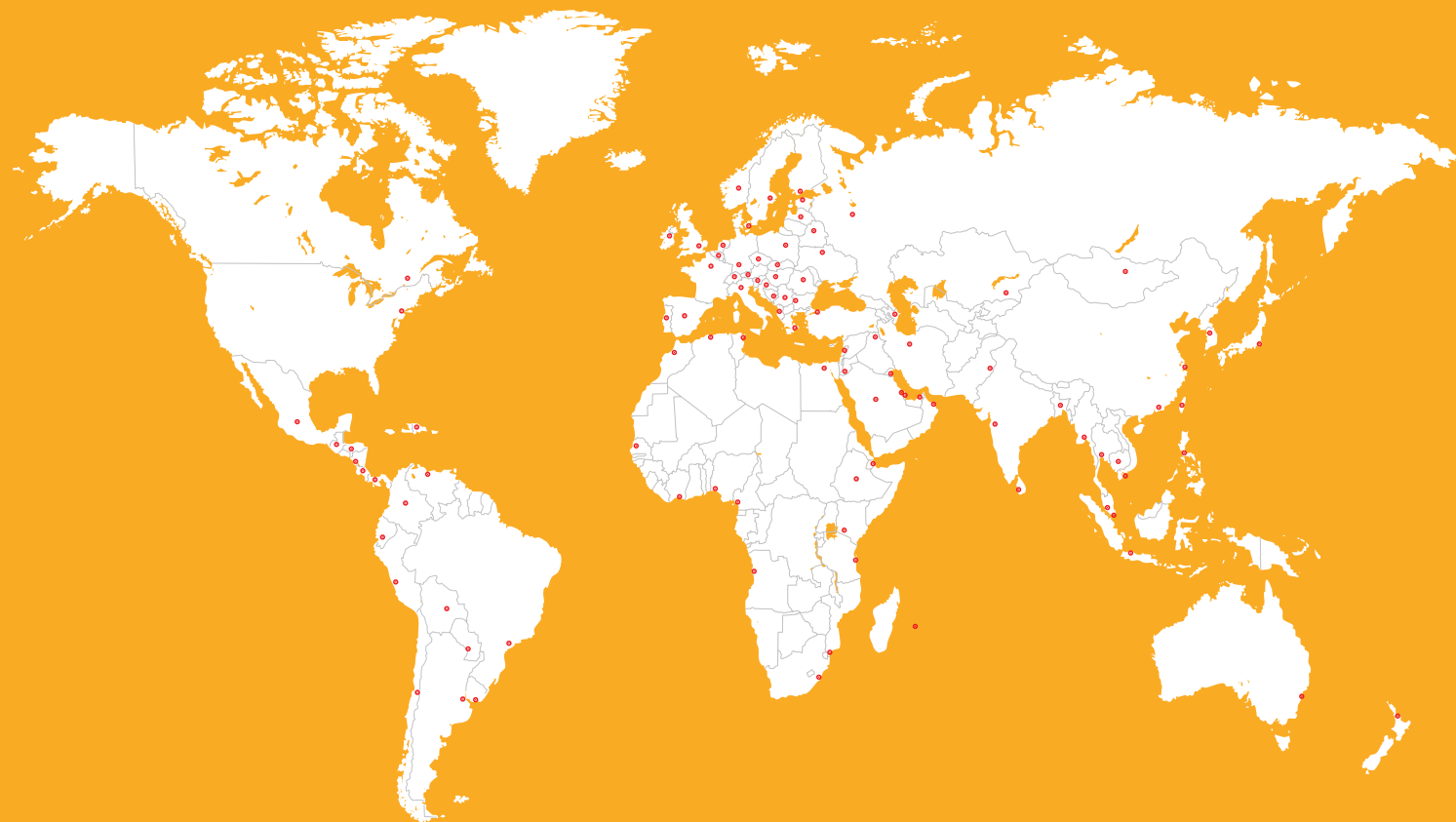
SikaSeal® construction sealants all have very low emissions, comply with the most stringent standards to ensure good indoor air quality, and reduce exposure.



\* Information sur le niveau d'émission de substances volatiles dans l'air intérieur, présentant un risque de toxicité par inhalation, sur une échelle de classe allant de A+ (très faibles émissions) à C (fortes émissions).



# GLOBAL BUT LOCAL PARTNERSHIP



## FOR MORE SEALING & BONDING INFORMATION:



### WE ARE SIKA

Sika is a specialty chemicals company with a leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing and protecting in the building sector and the motor vehicle industry. Sika's product lines feature concrete admixtures, mortars, sealants and adhesives, structural strengthening systems, industrial flooring as well as roofing and waterproofing systems.

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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**BUILDING TRUST**

