

## Sikaflex® Crystal Clear

Completely transparent multi-purpose sealant and adhesive

### Product Description / Uses

Sikaflex® Crystal Clear is a transparent, one part, moisture curing, solvent-free sealant and elastic adhesive. The product exhibits good adhesion to a large variety of building materials and is thus universally suitable for many joint sealing and bonding applications in the construction and home improvement sectors.

- As a multi-purpose adhesive suitable for most surfaces including metal, glass, concrete, plaster, plasterboard, wood surfaces, painted enamel, polyester, plastics, etc.
- As a sealant for vertical and horizontal connection joints indoors between partition walls, for metal and wood constructions, etc.

### Characteristics / Advantages

- Excellent adhesion to many typical substrates used in construction
- Solvent free, odourless
- 100% crystal clear / transparent
- Good workability
- Low shrinkage during cure
- Can be used on damp concrete

### Approvals / Standards

Conforms to EN 15651-1 F EXT-INT CC  
Conforms to ISO 11600 F 20 LM

### Product Data

**Colours** transparent

**Packaging** 300 g cartridge (290 ml), 12 cartridges per box, 1344 cartridges per pallet

**Storage Conditions /  
Shelf-Life** 12 months from date of production if stored properly in original unopened, sealed and undamaged packaging in cool and dry conditions at temperatures between +5 °C and +25 °C. Protect from direct sunlight.

Construction



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## Technical Data

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<b>Chemical base</b>	Silane-modified polymer	
<b>Density</b>	1.05 kg/l approx. <sup>1)</sup>	(ISO 1183-1)
<b>Skin time</b>	30 minutes approx. <sup>1)</sup>	
<b>Curing rate</b>	3 mm / 24 hours approx. <sup>1)</sup>	
<b>Application temperature</b>	+5 °C to +40 °C, min. 3 °C above dew point temperature	
<b>Service temperature</b>	-40 °C to +80 °C	
<b>Tensile strength</b>	2.0 N/mm <sup>2</sup> approx. <sup>1)</sup>	(ISO 37)
<b>Shore A hardness</b>	30 approx. <sup>1)</sup> (after 28 days)	(ISO 868)
<b>Secant Tensile Modulus</b>	0.3 N/mm <sup>2</sup> approx. at 60% elongation <sup>1)2)</sup>	(ISO 8339)
<b>Elongation at break</b>	400% approx. <sup>1)</sup>	(ISO 37)
<b>Elastic recovery</b>	>70% approx. <sup>1)2)</sup>	(ISO 7389)

<sup>1)</sup> 23 °C / 50% r.h.

<sup>2)</sup> Conditioning: Method A

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## System Information

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### Consumption / Joint Design

Sealing applications:

The joint width must be designed to suit the movement capability of the sealant. In general the joint width must be >6 mm and <20 mm. A width to depth ratio of ~ 2:1 for joints must be maintained.

Joints <10 mm width are for crack control and therefore non movement joints.

Relevant is the joint width at the time of application of the sealant (guide value of +10 °C).

Backing: Use closed cell, polyethylene foam backing rods.

Bonding applications:

- In spots:  
1 cartridge for 100 x 3 cm spots (Diameter = 3 cm; thickness = 0.4 cm)
- In strips:  
Using a nozzle, with 5 mm diameter, bead yields approx. 15 m length per 290 ml cartridge (20 ml approx. per linear meter).

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### Substrate quality

Clean and homogeneous, even, free from grease, dust and loose particles. Laitance and other poorly adhering particles must be removed.

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### Substrate Preparation

Sikaflex<sup>®</sup> Crystal Clear generally has strong adhesion without primers and/or activators to most clean and sound substrates. The following procedure shall be followed for optimum adhesion and critical, high performance applications such as extreme weather exposure or temporary water immersion:

#### Non porous substrates

Aluminium, anodised aluminium, stainless steel, hard PVC, galvanised steel, powder coated metals or glazed tiles have to be cleaned and pre-treated with Sika<sup>®</sup> Aktivator-205 by using a clean towel. Before bonding, allow a flash-off time of >15 minutes (max. 6 hours).

Metals like copper, brass, titanium-zinc, etc. have to be cleaned and pre-treated with Sika<sup>®</sup> Aktivator-205 by using a clean towel. After a flash-off time of >15 minutes, apply Sika<sup>®</sup> Primer-3 N by using a brush and allow a flash-off time of >30 minutes (max. 8 hours) before bonding.

#### Porous substrates

Concrete, aerated concrete and cementitious plasters, mortars, bricks, etc. have to be primed with Sika<sup>®</sup> Primer-3 N by using a brush. Before bonding allow a flash-off time of >30 minutes (max. 8 hours).

For detailed pre-treatment instructions please contact our Technical Service Department.

Primers are adhesion promoters. They neither substitute the correct cleaning of the surface nor improve its strength significantly.

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## Application Details

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### Application Methods / Tools

Sikaflex® Crystal Clear is supplied ready to use.

#### Sealing:

After suitable joint and substrate preparation, insert backing rod to required depth and apply primer if necessary. Insert cartridge into sealant gun and firmly extrude Sikaflex® Crystal Clear into joint making sure that it is in full contact with both sides of the joint. Fill the joint, avoiding air entrapment. Sikaflex® Crystal Clear must be tooled firmly against joint sides to ensure good adhesion.

Masking tape must be used where sharp, exact joint lines or exceptionally neat lines are required. Remove the tape whilst the sealant is still soft. Slick joint with smoothing liquid for a perfect sealant surface.

#### Bonding:

After substrate preparation apply Sikaflex® Crystal Clear in strips or spots on the bonding surface at intervals of a few centimetres. Use hand pressure to set the element to be bonded into position. Use adhesive tape, wedges, or props to hold the assembled elements together for the initial hours of curing. An incorrectly positioned element can be easily unfastened and repositioned in the first few minutes after application. Apply pressure again.

The recommended adhesive layer thickness - depending on surface evenness - is less than 3 mm.

Fresh, uncured adhesive remaining on the surface must be removed immediately.

Final strength will be obtained after complete curing of Sikaflex® Crystal Clear.

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### Cleaning of Tools

Clean all tools and application equipment with Sika® Remover-208 /

Sika® TopClean-T immediately after use. Cured material can only be removed mechanically.

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### Notes on Application / Limitations

Before bonding, check adhesion and resistance of paints and coatings by carrying out a trial.

Do not use outside on easily corroding substrates like blank steel, iron, etc.

Discoloration may occur due to exposure to chemicals, high temperatures, and UV-radiation. However a change in colour will not adversely influence the technical performance or the durability of the product.

Before using on natural stone contact our Technical Service.

Do not use Sikaflex® Crystal Clear on bituminous substrates, natural rubber or on building materials which might bleed oils, plasticisers or solvents which could attack the sealant.

Do not use for glass bonding if the bondline or the adhesive/substrate interface are directly exposed to sunlight

Do not use on PE, PP, PTFE and certain plasticized synthetic materials.

Do not use Sikaflex® Crystal Clear to seal swimming pools.

Not suitable for joints exposed to water pressure or permanent water immersion.

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**Value Base** All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

**Local Restrictions** Please note that as a result of specific local regulations the application of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

**Health and Safety Information** For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

**Legal Notes** The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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