

# Sikaflex® Construction+

## 1-part flexible sealant for concrete and masonry facades

**Product Description / Uses** Sikaflex® Construction+ is a 1-part, moisture curing, elastic joint sealant suitable for movement and connection joints in facades.

**Characteristics / Advantages**

- Very good weathering- and ageing resistance
- Movement capability of  $\pm 35$  (ASTM C719)
- Bubble-free curing
- Easy to smooth and very good workability
- Good adhesion to many substrates
- Solvent free and odourless
- Very low emissions
- Suitable for use in hot and tropical climatic conditions
- Innovative surface:
  - slightly structured when dry tooled
  - smooth when wet tooled

**Approvals / Standards**

Conforms to EN15651-1 F EXT-INT CC 25 HM  
Conforms to ISO 11600 F 25 HM  
Conforms to ASTM C920 class 35  
EMICODE EC 1<sup>PLUS</sup> R, very low emission

**Specific Ratings**

LEED® EQc 4.1	SCAQMD, Rule 1168	BAAQMD, Reg. 8, Rule 51
passes	passes	passes

**Product Data**

**Colours**

white, beige, brown, black, concrete grey, medium grey, dark grey, grey 5057  
further colours available upon request

**Packaging**

600 ml foil pack, 20 foil packs per box  
300 ml cartridge, 12 cartridges per box

**Storage Conditions / Shelf-Life**

15 months from date of production if stored in undamaged original sealed containers, in dry conditions and protected from direct sunlight at temperatures between +5°C and +25°C.

Construction



## Technical Data

<b>Chemical Base</b>	i-Cure <sup>®</sup> technology polyurethane	
<b>Density</b>	1.44 kg/l approx. <sup>2)</sup>	(CQP <sup>1)</sup> 006-4, ISO 1183-1)
<b>Sag Flow</b>	0 mm (20 mm profile, 50°C)	(CQP 061-4, ISO 7390)
<b>Skin Time</b>	65 minutes approx. <sup>2)</sup>	(CQP 019-1)
<b>Tooling Time</b>	60 minutes approx. <sup>2)</sup>	(CQP 019-2)
<b>Curing Rate</b>	3 mm/24 h approx. <sup>2)</sup>	(CQP 049-1)
<b>Movement Capability</b>	±25% ±35 %	(ISO 9047) (ASTM C719)
<b>Shore A Hardness</b>	28 after 28 days approx. <sup>2)</sup>	(CQP 023-1, ISO 868)
<b>Tear Propagation Resistance</b>	5.0 N/mm approx. <sup>2)</sup>	(CQP 045-1, ISO 34)
<b>Secant Tensile Modulus</b>	0.45 N/mm <sup>2</sup> approx. at 100% elongation <sup>2), 3)</sup> 1.10 N/mm <sup>2</sup> approx. at 100% elongation (-20°C) <sup>3)</sup>	(CQP 020-1, ISO 8339)
<b>Elongation at Break</b>	800% approx. <sup>2)</sup>	(CQP 036-1, ISO 37)
<b>Elastic Recovery</b>	> 90% <sup>2), 3)</sup>	(CQP 018-1, ISO 7389)
<b>Application Temperature</b>	+5°C to +40°C, min. 3°C above dew point temperature	
<b>Service Temperature</b>	-40°C to +70°C	

<sup>1)</sup> Sika Corporate Quality Procedure

<sup>2)</sup> 23°C / 50% r.h.

<sup>3)</sup> conditioning: Method B

## Application Details

### Joint Design/ Consumption

The joint width must be designed to suit the movement capability of the sealant. In general the joint width should be > 10 mm and < 40 mm. A width to depth ratio of approx. 2:1 must be maintained.

#### Standard joint widths for joints between concrete elements with $\Delta T^* = 80 \text{ }^\circ\text{C}$

Joint distance [m]	2	4	6	8	10
Min. joint width [mm]	10	15	20	28	35
Min. joint depth [mm]	10	10	10	14	17

\* $\Delta T$  is considered to be the difference between the highest expected temperature in use (or lowest, check which case leads to higher  $\Delta T$ ) and the application temperature.

All joints must be properly designed and dimensioned in accordance with the relevant standards, before construction. Basis for calculation of the necessary joint width are the technical values of the joint sealant and the adjacent building materials, as well as the exposure of the building, type of construction and its dimensions.

#### Approximate consumption

Joint width [mm]	10	15	20	25	30
Joint depth [mm]	10	10	10	12	15
Joint length / 600 ml [m]	6	4	3	2	1.3

Backing: Use closed cell, polyethylene foam backing rods.

<b>Substrate Preparation / Priming</b>	<p>Sikaflex® Construction+ generally has strong adhesion without primers and/or activators to most dry, clean and sound substrates.</p> <p>For optimum adhesion and critical, high performance applications such as multi story building work, high stress bonding joints, extreme weather exposure or water immersion the following procedure shall be followed:</p> <p><u>Non porous substrates</u></p> <p>Aluminium, anodised aluminium, stainless steel, galvanised steel, powder coated metals or glazed tiles have to be cleaned and pre-treated with Sika® Aktivator-205 by using a clean towel. Before sealing allow a flash-off time &gt;15 min (max.6 hours).</p> <p>Metals like copper, bras, titanium-zinc etc. have to be cleaned and pre-treated with Sika® Aktivator-205 by using a clean towel. After a flash-off time &gt;15 minutes, apply Sika® Primer-3 N by using a brush and allow a flash-off time &gt;30 minutes (max. 8 hours) before sealing.</p> <p>PVC has to be cleaned and thereafter pre-treated with Sika® Primer-215 by using a brush. Before sealing allow a flash-off time &gt; 30 min (max.8 hours).</p> <p><u>Porous substrates</u></p> <p>Concrete, aerated concrete and cementitious plasters, mortars, brick, etc. have to be primed with Sika® Primer-3 N by using a brush. Before sealing allow a flash-off time &gt;30 minutes (max. 8 hours).</p> <p>For detailed instructions consult the Product Data Sheet for pre-treatments or contact our Technical Service Department.</p> <p>Primers are adhesion promoters. They neither substitute for the correct cleaning of the surface nor improve its strength significantly.</p>
<b>Application Method / Tools</b>	<p>Sikaflex® Construction+ is supplied ready to use</p> <p>After suitable substrate preparation, insert backing rod to the required depth and apply primer if necessary. Insert foil pack into sealant gun and extrude Sikaflex® Construction+ into joint making sure that it is in full contact with the sides of the joint and avoid air entrapment. Sikaflex® Construction+ must be tooled firmly against joint sides to ensure good adhesion.</p> <p>Masking tape may be used where exact joint lines or exceptionally neat lines are required. Remove the tape within the skin time.</p> <p>If Sikaflex® Construction+ is dry-tooled it shows a slightly structured, concrete-like surface. If it is wet-tooled (by using a compatible tooling agent e.g. Sika® Tooling Agent N) it shows a smooth surface.</p> <p>Do not use solvent containing products as tooling agents.</p>
<b>Cleaning of Tools</b>	<p>Clean all tools and application equipment with Sika® Remover-208 Sika® Thinner C immediately after use. Once cured the material can only be removed mechanically.</p>
<b>Further Documents available</b>	<ul style="list-style-type: none"> <li>■ Safety Data Sheet (SDS)</li> <li>■ Pre-treatment Chart Sealing &amp; Bonding</li> <li>■ Method Statement Joint Sealing</li> <li>■ Method Statement Joint Maintenance, Cleaning and Renovation</li> <li>■ Technical Manual Facade Sealing</li> </ul>
<b>Notes on Application / Limitations</b>	<p>Sikaflex® Construction+ can be over-painted with most conventional paint systems. The paint must be tested for compatibility by carrying out preliminary trials and the best results are obtained if the sealant is allowed to cure fully first. Please note that non-flexible paint systems may impair the elasticity of the sealant and lead to cracking of the paint film.</p> <p>Colour deviations may occur due to exposure to chemicals, high temperatures, UV-radiation (especially with colour shade white). However a change in colour will not adversely influence the technical performance or the durability of the product.</p> <p>Before using on natural stone contact our Technical Service.</p> <p>Do not use Sikaflex® Construction+ on bituminous substrates, natural rubber, EPDM rubber or on building materials which might bleed oils, plasticisers or solvents which could attack the sealant. Do not use Sikaflex® Construction+ to seal swimming pools. Sikaflex® Construction+ shall not be used for joints with water pressure or permanent water immersion.</p> <p>Do not expose uncured Sikaflex® Construction+ to alcohol containing products as they may interfere with the curing reaction.</p>

## 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.

## 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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