

# PRODUCT DATA SHEET

## Sikaflex® Precast

### Polyurethane facade sealant

#### DESCRIPTION

Sikaflex® Precast is a 1-part, moisture-curing, elastic joint sealant with good mechanical properties. It remains elastic over a wide temperature range and provides a waterproof seal between precast and prefabricated elements.

#### USES

Sealing joints for:

- Movement and connections between precast and prefabricated elements
- For interior and exterior use

#### CHARACTERISTICS / ADVANTAGES

- Movement capability of  $\pm 25\%$  (ASTM C719)
- Good adhesion to concrete
- Bubble-free curing
- Good sag flow properties

#### SUSTAINABILITY

- Conformity with LEED v2009 IEQc 4.1: Low-Emitting Materials - Adhesives and Sealants

#### APPROVALS / CERTIFICATES

- CE Marking and Declaration of Performance to EN 15651-1 - Sealants for non-structural use in joints in buildings - Facade elements - F-EXT-INT CC
- EN ISO 11600-F Class 20 HM, Sikaflex® Precast, SKZ, Test report No. 113665/14-III
- ASTM C920-11 Class 25, Sikaflex Precast, MST, Report No. 1213920-SIKA

#### PRODUCT INFORMATION

<b>Composition</b>	i-Cure® Technology polyurethane	
<b>Packaging</b>	600 ml cylindrical foil pack: 20 foil packs per box Refer to current price list for packaging variations	
<b>Colour</b>	Concrete grey, white, beige	
<b>Shelf life</b>	12 months from date of production	
<b>Storage conditions</b>	The product must be stored in original, unopened and undamaged packaging in dry conditions at temperatures between +5 °C and +25 °C. Always refer to packaging.	
<b>Density</b>	~1.60 kg/l	(ISO 1183-1)
<b>Product declaration</b>	EN 15651-1: F EXT-INT CC ISO 1600: F 20 HM ASTM C920-11: Class 25	

## TECHNICAL INFORMATION

Shore A hardness	~40 (after 28 days)	(ISO 868)
Secant tensile modulus	~0.60 N/mm <sup>2</sup> at 60 % elongation (+23 °C)	(ISO 8339)
Elastic recovery	~90 %	(ISO 7389)
Tensile strain at break	~500 %	(ISO 37)
Tear propagation resistance	~7 N/mm	(ISO 34)
Movement capability	± 25 % ± 20 %	(ASTM C 719) (ISO 9047)
Service temperature	-40 °C to +70 °C	

### Joint design

The joint dimensions must be designed to suit the movement capability of the sealant. The joint width must be a minimum of 6 mm and a maximum of 30 mm. A width to depth ratio of 2:1 must be maintained. Joint widths less than 10 mm are generally for interior connection joints or crack control joints and therefore considered as non-movement joints.

Example of typical joint widths for joints between concrete elements for exterior applications if the joint sealant is classified as ±25 % movement capability according to ASTM C719:

Joint distance in m	Min. joint width in mm	Min. joint depth in mm
2	10	10
4	15	10
6	20	10
8	30	15
10	35	17

Example of typical joint widths for joints between concrete elements for exterior applications if the joint sealant is classified as ±20 % movement capability according to ISO 9047:

Joint distance in m	Min. joint width in mm	Min. joint depth in mm
2	10	10
4	20	10
6	30	15
8	40	20
10	50	25

All joints must be correctly designed and dimensioned in accordance with the relevant standards and codes of practice before their construction. The basis for calculation of the necessary joint widths are:

- The type of structure
- Dimensions
- Technical values of the adjacent building materials
- Joint sealing material
- The specific exposure of the building and the joints

For joint design and calculations contact Sika® Technical Services for additional information.

## APPLICATION INFORMATION

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

Consumption depends on the roughness and absorbency of the substrate. These figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level or wastage etc.

<b>Backing material</b>	Use closed cell, polyethylene foam backing rod		
<b>Sag flow</b>	< 3 mm (20 mm profile, +50 °C )		(ISO 7390)
<b>Ambient air temperature</b>	+5 °C min. / +50 °C max.		
<b>Substrate temperature</b>	+5 °C min. / +50 °C max. Minimum +3 °C above dew point temperature		
<b>Curing rate</b>	~2 mm / 24 hours (+23 °C / 50 % r.h.)		(CQP* 049-2)
	*Sika Corporate Quality Procedure		
<b>Skimming time</b>	~65 minutes (+23 °C / 50 % r.h.)		(CQP 019-1)
<b>Tooling time</b>	~40 minutes (+23 °C / 50 % r.h.)		(CQP 019-2)

## BASIS OF PRODUCT DATA

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

## FURTHER INFORMATION

- Pre-treatment Sealing and Bonding Chart
- Sika® Method Statement: Joint Sealing
- Sika® Method Statement: Joint Maintenance, Cleaning and Renovation
- Sika® Technical Manual: Facade Sealing

## IMPORTANT CONSIDERATIONS

- Sikaflex® Precast can be over-painted with most conventional facade paint coating systems. However, paints must first be tested to ensure compatibility by carrying out preliminary trials (e.g. according to ISO technical paper: Paintability and Paint Compatibility of Sealants). Optimum results are obtained when the sealant is allowed to fully cure first.  
Note: non-flexible paint systems may impair the elasticity of the sealant and lead to cracking of the paint coating. Depending on type of paint used, plasticiser migration may occur causing the paint to become surface 'tacky'.
- Colour variations may occur due to the exposure in service to chemicals, high temperatures and/or UV-radiation (especially with white colour shade). This effect is aesthetic and does not adversely influence the technical performance or durability of the product.

- Do not use on natural stone.
- Do not use on bituminous substrates, natural rubber, EPDM rubber or on any building materials which might leach oils, plasticisers or solvents that could degrade the sealant.
- Do not use to seal joints in and around swimming pools.
- Do not use for joints under water pressure or for permanent water immersion.
- Do not expose uncured Sikaflex® Precast to alcohol containing products as this may interfere with the curing reaction.

## ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

## APPLICATION INSTRUCTIONS

### SUBSTRATE PREPARATION

The substrate must be clean, dry, sound and free from oils, grease, dust, cement laitance and loose or friable particles. Use removal techniques such as wire brushing, grinding, grit blasting or other suitable mechanical tools.

Sikaflex® Precast adheres without primers and/or activators.

For optimum adhesion, joint durability and critical, high performance applications such as joints on multi-

storey buildings, highly stressed joints, extreme weather exposure or water immersion / exposure. The following priming and/or pre-treatment procedures must be followed:

#### **Porous substrates**

1. Concrete, aerated concrete and cement based renders, mortars and bricks surfaces must be primed using Sika® Primer-3 N applied by brush.
2. Before sealing, allow a waiting time of > 30 minutes (< 8 hours).

Note: Primers and activators are adhesion promoters and not an alternative to improve poor preparation / cleaning of the joint surface. Primers also improve the long term adhesion performance of the sealed joint. Contact Sika® Technical Services for additional information.

#### **MIXING**

1-part ready to use.

#### **APPLICATION METHOD / TOOLS**

Strictly follow installation procedures as defined in method statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

#### **Masking**

1. Use masking tape where neat or exact joint lines are required. Remove the tape within the skinning time after finishing.

#### **Joint Backing**

1. After the required substrate preparation, insert a suitable backing rod to the required depth.

#### **Priming**

1. Where required, prime the joint surfaces as recommended in substrate preparation. Avoid excessive application of primer to avoid causing puddles at the base of the joint.

#### **Application**

1. Sikaflex® Precast is supplied ready to use.
2. Prepare the end of the foil pack or cartridge, insert into the sealant gun and fit the nozzle.
3. Extrude Sikaflex® Precast into the joint ensuring that it comes into full contact with the sides of the joint and avoiding any air entrapment.

#### **Finishing**

1. As soon as possible after application, sealant must be firmly tooled against the joint sides to ensure adequate adhesion and a smooth finish.
2. Use a compatible tooling agent (e.g. Sika® Tooling Agent N) to smooth the joint surface. Water can be used. Do not use tooling products containing solvents.

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#### **CLEANING OF EQUIPMENT**

Clean all tools and application equipment with Sika® Remover-208 immediately after use. Hardened material can only be removed mechanically. For cleaning skin, use Sika® Cleaning Wipes-100.

#### **LOCAL RESTRICTIONS**

#### **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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