

# PRODUCT DATA SHEET

## Sikaflex<sup>®</sup>-11 FC+



### DESCRIPTION

Sikaflex<sup>®</sup>-11 FC+ is a 1-component, solvent-free joint sealant and multipurpose adhesive with high non-sag consistency.

### USES

Sikaflex<sup>®</sup>-11 FC+ is designed as a joint sealant for vertical and horizontal joints, soundproofing of pipes between concrete and sheathing, caulking between partitions, seam sealing, sealing in metal and wood construction and for ventilation construction.

Sikaflex<sup>®</sup>-11 FC+ is designed as a multipurpose adhesive for indoor and outdoor bonding of window sills, thresholds, stair steps, skirting boards, base boards, crash protection boards, covering boards and prefabricated elements.

### CHARACTERISTICS / ADVANTAGES

- Silicone-free
- Very good adhesion to most construction materials
- No need to grout the bonded areas
- Good mechanical resistance
- Good resistance to weathering
- Impact and vibration absorbing
- Very low emissions

### SUSTAINABILITY

- EMICODE EC1<sup>PLUS</sup> R
- LEED<sup>®</sup> EQc 4.1
- SCAQMD, Rule 1168
- BAAQMD, Reg. 8, Rule 51

### APPROVALS / CERTIFICATES

- ISEGA certificate for foodstuff area usage

### PRODUCT INFORMATION

<b>Composition</b>	i-Cure Technology polyurethane
<b>Packaging</b>	300 ml cartridge 600 ml cartridge Please contact our customer service, for information of what packaging sizes are sold in Denmark.
<b>Colour</b>	White, black, concrete grey, brown Please contact our customer service, for information of which colors are sold in Denmark.

<b>Shelf life</b>	Sikaflex®-11 FC+ has a shelf life of 15 months from the date of production, if it is stored properly in undamaged, original, sealed packaging, and if the storage conditions are met.
<b>Storage conditions</b>	Sikaflex®-11 FC+ shall be stored in dry conditions, protected from direct sunlight and at temperatures between +5 °C and +25 °C.
<b>Density</b>	1.30 kg/l approx. (ISO 1138-1)

## TECHNICAL INFORMATION

<b>Shore A Hardness</b>	37 approx. (after 28 days) (ISO 868)
<b>Tensile Strength</b>	1.5 N/mm <sup>2</sup> approx. (ISO 37)
<b>Secant Tensile Modulus</b>	0.60 N/mm <sup>2</sup> approx. (after 28 days) (23 °C) (ISO 8339)
<b>Elongation at Break</b>	700% approx. (ISO 37)
<b>Elastic Recovery</b>	75% approx. (after 28 days) (ISO 7389)
<b>Tear Propagation Resistance</b>	8.0 N/mm approx. (ISO 34)
<b>Chemical Resistance</b>	Sikaflex®-11 FC+ is resistant to water, seawater, diluted alkalis, cement grout and water dispersed detergent. Sikaflex®-11 FC+ is not resistant to alcohols, organic acids, concentrated alkalis and concentrated acids, chlorinated (hydro-carbons) fuel. For detailed information please contact our Technical Service Department.
<b>Service Temperature</b>	-40 °C to +80 °C

### Joint Design

The joint width must be designed to suit the joint movement required and the movement capability of the sealant. The joint width shall be  $\geq 10$  mm and  $\leq 35$  mm. A width to depth ratio of 1:0.8 for floor joints and 2:1 for facade joints must be maintained.

Standard joint widths for joints between concrete elements:

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

All joints must be correctly designed and dimensioned in accordance with the relevant standards, before their construction. The basis for calculation of the necessary joint widths are the type of structure and its dimensions, the technical values of the adjacent building materials and the joint sealing material, as well as the specific exposure of the building and the joints.

Joints  $\leq 10$  mm in width are for crack control and therefore non-movement joints. What is relevant is the joint width at the time of application of the sealant (guide value of +10 °C).

For larger joints please contact our Technical Service Department.

## APPLICATION INFORMATION

<b>Consumption</b>	Approximate consumption for floor joints
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Joint length [m] per 600 ml	Joint length [m] per 300 ml	Joint width [mm]	Joint depth [mm]
6	3	10	10
2.5-3	1.5	15	12-15
1.8	0.9	20	17
1.2	0.6	25	20
0.8	0.4	30	25

Minimum joint width for perimeter joints around windows is 10 mm.

<b>Backing Material</b>	Use closed cell, polyethylene foam backing rods.		
<b>Sag Flow</b>	6 mm (20 mm profile, 23 °C)		(ISO 7390)
<b>Ambient Air Temperature</b>	+5 °C to +40 °C, min. 3 °C above dew point temperature		
<b>Relative Air Humidity</b>	30% to 90%		
<b>Substrate Temperature</b>	+5 °C to +40 °C		
<b>Curing Rate</b>	3.5 mm/24 hours approx. (23 °C / 50% r.h.)		(CQP 049-2)
<b>Skinning time</b>	70 minutes approx. (23 °C / 50% r.h.)		(CQP 019-1)

## APPLICATION INSTRUCTIONS

### SUBSTRATE PREPARATION

The substrate must be clean, dry, sound and homogeneous, free from oils, grease, dust and loose or friable particles. Paint, cement laitance and other poorly adhering contaminants must be removed. Sikaflex®-11 FC+ adheres without primers and/or activators. However, for optimum adhesion and critical, high performance applications, such as on multi-story buildings, highly stressed joints, extreme weather exposure or water immersion, the following priming and/or pre-treatment procedures shall be followed:

#### Non-porous substrates

Glazed tiles, powder coated metals, aluminium, anodised aluminium, stainless steel and galvanised steel have to be treated with a very fine abrasive pad and Sika® Aktivator-205 shall be applied using a clean towel. Before sealing allow a flash-off time of > 15 minutes.

All metal surfaces that are not mentioned above have to be treated with a very fine abrasive pad and Sika® Primer-3 N shall be applied using a clean brush or roller. Before sealing allow a flash-off time of > 30 minutes (< 8 hours).

PVC has to be pre-treated with Sika® Primer-215 applied with a clean brush. Before sealing allow a flash-off time of > 30 minutes (< 8 hours).

#### Porous substrates

Concrete, aerated concrete and cement-based renders, mortars, brick, and natural stone have to be primed with Sika® Primer-3 N applied with a clean brush. Before sealing allow a flash-off time of > 30 minutes (< 8 hours).

For detailed advice, please contact our Technical Service Department.

Note: Primers are adhesion promoters. They are neither a substitute for the correct cleaning of a surface, nor do they improve the strength of the surface significantly.

### APPLICATION METHOD / TOOLS

Sikaflex®-11 FC+ is supplied ready to use.

After the necessary substrate preparation, insert a suitable backing rod to the required depth and apply any primer if necessary. Insert a cartridge into the sealant gun and extrude Sikaflex®-11 FC+ into the joint making sure that it comes into full contact with the sides of the joint and avoids any air entrapment.

Sikaflex®-11 FC+ sealant must be firmly tooled against the joint sides to ensure adequate adhesion.

It is recommended to use masking tape where exact joint lines or neat lines are required. Remove the tape within the skin time. Do not use tooling products containing solvents.

After substrate preparation, apply Sikaflex®-11 FC+ in beads, strips or spots to the bonding surface in intervals of a few centimetres each.

Use hand pressure only to set the element to be bonded into position. If necessary, use adhesive tapes, wedges, or props to hold the assembled elements together during the initial curing hours.

An incorrectly positioned element can easily be unfastened and repositioned during the first few minutes after application.

Optimum bonding will be obtained after the complete curing of Sikaflex®-11 FC+, i.e. after 24 to 48 hours at +23 °C for an adhesive thickness between 2 to 3 mm.

### CLEANING OF EQUIPMENT

Clean all tools and application equipment immediately after use with Sika® Remover-208 and/or Sika® Top-Clean T. Once cured, residual material can only be removed mechanically.

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October 2019, Version 01.02

020513010000000019

## FURTHER INFORMATION

- Safety Data Sheet
- Pre-treatment Chart Sealing and Bonding

## IMPORTANT CONSIDERATIONS

- Elastic sealants may not be overpainted because paints have a limited movement capability and thus will crack during joint movements.
- Colour variations may occur due to exposure to chemicals, high temperatures and/or UV-radiation (especially with the colour shade white). However, a change in colour is purely of aesthetic nature and does not adversely influence the technical performance or durability of the product. Before using on natural stone contact our Technical Service.
- Before using Sikaflex®-11 FC+ on natural stone, please refer to our Technical Service Department for advice.
- Do not use Sikaflex®-11 FC+ as a glass sealer, on bituminous substrates, natural rubber, EPDM rubber or on any building materials which might bleed oils, plasticizers or solvents that could attack the sealant.
- Do not use Sikaflex®-11 FC+ to seal joints in and around swimming pools.
- Do not use Sikaflex®-11 FC+ for joints under water pressure or for permanent water immersion.
- Do not expose uncured Sikaflex®-11 FC+ to alcohol containing products as this may interfere with the curing reaction.

## 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.

## LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

## ECOLOGY, HEALTH AND SAFETY

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

## LEGAL NOTES

Any information or suggestions for use concerning Sika's products, which we either in writing or orally have given buyers or end-users of the product have been given in good faith based on our own experiences and based on approved praxis and the technological and scientific knowledge on the time of giving such suggestions and information, which are given without any type of guarantees, and which do not lead to any further responsibility from Sika Danmark A/S, besides what is stated in the sales agreement in question. The buyer or end-user should themselves investigate or otherwise make sure that our products are suitable for the use in question and further make sure that the products are kept and used correct and in agreement with the published rules and considering the actual conditions in order to avoid damages or less satisfactory results. Any order is accepted and any deliverance is affected according to the general terms of sales and delivery from Sika Danmark A/S, which are considered known and accepted, and which could be handed out when asked for. Our catalogues are not up-dated automatically. The present product data sheet is only for use in Denmark. Values stated in the present product data sheet should be seen as recommended, unless stated otherwise.

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October 2019, Version 01.02  
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Sikaflex-11FC+-en-DK-(10-2019)-1-2.pdf