BUILDING TRUST

PRODUCT DATA SHEET

Sikaflex®-11 FC+

JOINT SEALANT AND MULTI-PURPOSE ADHESIVE. SIKAFLEX-11 FC+ IS A ONE PART, MOISTURE CURING, ELASTIC JOINT SEALANT AND MULTI-PURPOSE ADHESIVE BASED ON POLYURETHANE. SUITABLE FOR INDOOR AND OUTDOOR APPLICATIONS.

PRODUCT DESCRIPTION

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

USES

Sikaflex®-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®-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

ENVIRONMENTAL INFORMATION

- EMICODE EC1^{PLUS} R
- LEED® EQc 4.1
- SCAQMD, Rule 1168
- BAAQMD, Reg. 8, Rule 51

APPROVALS / STANDARDS

- ISEGA certificate for foodstuff area usage

PRODUCT INFORMATION

Chemical Base	*i*-Cure Technology polyurethane	
Packaging	300 ml cartridge 600 ml cartridge	
Colour	Concrete grey, Black, Brown, Beige, White	
Shelf Life	Sikaflex®-11 FC+ has a shelf life of 15 months from the date of production, if stored properly in an undamaged, original, sealed packaging and if the storage conditions are met.	
Storage Conditions	Sikaflex®-11 FC+ shall be stored in dry conditions, protected from direct sunlight and at temperatures between +5 °C and +25 °C.	
Density	~1.30 kg/l	(ISO 1138-1)

TECHNICAL INFORMATION

Shore A Hardness	~37 (after 28 days)	(ISO 868)
Tensile Strength	~1.5 N/mm^2	(ISO 37)

Secant Tensile Modulus	~0.60 N/mm² (after 28 days) (23 °C)	(ISO 8339)
Elongation at Break	~700%	(ISO 37)
Elastic Recovery	~75% (after 28 days)	(ISO 7389)
Tear Propagation Resistance	~8.0 N/mm	(ISO 34)
Chemical Resistance	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.	
Service Temperature	–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 ≥ 10 mm and ≤ 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 ≤ 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

Consumption

Approximate consumption for floor joints

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.

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

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.

FURTHER DOCUMENTS

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

LIMITATIONS

- 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.

VALUE BASE

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

Local safety regulations must be observed and it advisable to wear PPI when working with this product with particular attention paid to cutting and handling. Transportation Class: The product is not classified as hazardous good for transport. Disposal: The material is recyclable. Disposal must be according to local regulations. Please contact your local Sika sales organisation for more information.

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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