



## Sikaflex®-11 FC+

1-part elastic joint sealant and multipurpose adhesive

Construction

### Product Description

Sikaflex®-11 FC+ is a one part, moisture curing, elastic joint sealant and multipurpose adhesive based on polyurethane. Suitable for indoor and outdoor applications.

### Uses

Sikaflex®-11 FC+ is a joint sealant and multipurpose adhesive therefore suitable for many various fields:

- Sikaflex®-11 FC+ used 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, for ventilation construction and many more
- Sikaflex®-11 FC+ used as a *multipurpose adhesive*. It is suitable for indoor and outdoor bonding of window sills, thresholds, stair steps, skirting boards, base boards, crash protections boards, covering boards, prefabricated elements and many more

### Characteristics / Advantages

*Sikaflex®-11 FC+ is:*

- 1-part, ready to use
- Flexible and elastic
- Solvent free and odorless
- Very low emission

*Sealant:*

- Bubble-free curing
- Very good adhesion to most construction materials
- Good mechanical resistance
- Good weather and ageing resistance
- Non sag consistency

*Adhesive:*

- No need to grout the bonded part
- Non-corrosive
- Impact and vibration absorbing

### Approval / Standards

EMICODE EC 1 PLUS "very low emission".

ISEGA Certificate for foodstuff area usage.

This product has been tested to meet the requirements of Regulation 31 (4)(b) of the Water Supply (Water Quality) Regulations 2000 and that the Secretary of State is satisfied that this product either alone or in combination with any other substance or product in the water is unlikely to affect adversely the quality of the water supplied. A copy of this test report is available on request.



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## Product Data

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### Form

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<b>Appearance / Colours</b>	White, grey, brown, black, beige
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<b>Packaging</b>	300 ml cartridges 600 ml sausages
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### Storage

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<b>Storage Conditions / Shelf-Life</b>	15 months from date of production if stored in undamaged original unopened containers, in dry conditions and protected from direct sunlight at temperatures between +10°C and +25°C.
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### Technical Data

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<b>Chemical Base</b>	1-part polyurethane, moisture curing
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<b>Density</b>	~ 1.35 kg/l
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<b>Skinning Time</b>	~ 65 minutes (+23°C / 50% r.h.)
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<b>Curing Rate</b>	~ 3.5 mm / 24h (+23°C / 50% r.h.)
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<b>Joint Dimensions</b>	Min. width = 10 mm / max width = 35 mm
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<b>Sag Flow</b>	0 mm, very good
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<b>Service Temperature</b>	-40°C to +80°C
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### Mechanical / Physical Properties

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<b>Tensile Strength</b>	~ 1,5 N/mm <sup>2</sup>
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<b>Tear Strength</b>	~ 8 N/mm <sup>2</sup>
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<b>Shore A Hardness</b>	~ 37 after 28 days (+23°C / 50% r.h.)
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<b>E-Modulus</b>	~ 0.6 N/mm <sup>2</sup> after 28 days (+23°C / 50% r.h.)
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<b>Elongation at Break</b>	~ 700% after 28 days (+23°C / 50% r.h.)
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<b>Elastic Recovery</b>	> 80% after 28 days (+23°C / 50% r.h.)
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### Resistance

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<b>Chemical Resistance</b>	Resistant to water, seawater, diluted alkalis, cement grout and water dispersed detergent.
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Not resistant to alcohols, organic acids, concentrated alkalis and concentrated acids, chlorinated (hydro-carbons) fuel.

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## System Information

### Application Details

#### Consumption / Joint Design

##### Joints:

The joint width must be designed to suit the movement capability of the sealant. In general the joint width must be > 10 mm and < 35 mm. A width to depth ratio of ~ 1 : 0.8 (for floor joints) and ~ 1 : 2 (for façade joints) must be maintained.

All joints must be properly designed and dimensioned by the specifier and the main contractor in accordance with the relevant standards, because changes are not usually feasible after construction. The basis for calculation of the necessary joint width is the technical values of the joint sealant and the adjacent building materials, plus the exposure of the building, its method of construction and its dimensions.

Joints < 10 mm 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).

##### Approximate consumption (for floor joints)

Joint width	10 mm	15 mm	20 mm	25 mm	30 mm
Joint depth	10 mm	12 - 15 mm	17 mm	20 mm	25 mm
Joint length / 600 ml	~ 6.0 m	~ 2.5 - 3.0 m	~ 1.8 m	~ 1.2 m	~ 0.8 m
Joint length / 310 ml	~ 3.0 m	~ 1.5 m	~ 0.9 m	~ 0.6 m	~ 0.4 m

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

*Backing:* Use only closed cell, polyethylene foam backing rods

##### Bonding:

- In spots:  
1 cartridge for 100 x 3 cm spots of Sikaflex®-11 FC<sup>+</sup>  
(Diameter =3cm; thickness = 0.4cm)
- In strips:  
1 cartridge for 12 meters of Sikaflex®-11 FC<sup>+</sup> with 5 x 5 mm cross section.  
On average 0.2 - 0.6 kg/m<sup>2</sup> depending on bonding area.

#### Substrate Quality

Clean and dry, homogeneous, free from oils and grease, dust and loose or friable particles. Cement laitance must be removed

#### Substrate Preparation / Priming

Sikaflex®-11 FC<sup>+</sup> generally has strong adhesion to most clean, sound substrates. For optimum adhesion and critical, high performance applications such as multi story building work, for high stress bonding joints or in case of extreme weather exposure substrate primers and cleaners must be used. If in doubt apply product in test area first.

##### *Non porous substrates:*

Glazed tiles, powder coated metals, aluminium, anodised aluminium, stainless steel and galvanised steel have to be cleaned with a fine abrasive pad and Sika®Aktivator-205 by using a clean towel or cloth. Before sealing allow a flash off time of at least 15 min.

**All other metal surfaces** not mentioned above have to be cleaned with a fine abrasive pad and Sika®Aktivator-205 by using a clean towel or cloth. After a flash off time of at least 15 minutes, apply Sika®Primer-3 N by using a brush. Before sealing allow a flash off time of at least 30 minutes (max. 8 hours).

For PVC use Sika®Primer-215 instead of Sika®Primer-3 N. Before sealing allow a flash off time of at least 30 minutes (max. 8 hours).

##### *Porous substrates:*

Concrete, aerated concrete and cementitious renders, mortars, brick, etc. have to be primed with Sika®Primer-3 N by using a brush.

Before sealing allow a flash off time of at least 30 minutes (max. 8 hours).

##### Important note:

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

Primers improve long term performance of a sealed joint. For further information please refer to the Sika® Primer table.

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**Application Conditions / Limitations**

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**Substrate Temperature** +5°C min. / +40°C max.

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**Ambient Temperature** +5°C min. / +40°C max.

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**Substrate Moisture Content** Dry

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**Dew Point** Substrate temperature must be 3°C above dew point.

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**Application Instructions**

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**Application Method / Tools**

Sikaflex® -11 FC<sup>+</sup> is supplied ready to use.

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® -11 FC<sup>+</sup> into joint making sure that it is full contact with the side of the joint. Fill the joint, avoiding air entrapment. Sikaflex® -11 FC<sup>+</sup> 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® -11 FC<sup>+</sup> in strips or spots on the bonding surface at intervals of a few centimeters. Use hand pressure to set the element to be bonded into position. If necessary, 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.

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

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**Cleaning of Tools**

Clean all tools and application equipment with Sika® Remover-208 / Thinners C immediately after use. Hardened (cured) material can only be removed mechanically.

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**Notes on Application / Limitations**

Elastic sealants may not be over painted since paints have a limited movement capability and thus will crack during joint movements.

Compatible coatings may cover the joint sides to max. 1 mm. The compatibility must be tested according to DIN 52 452-2.

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.

Before using on natural stone contact our Technical Service.

Do not use Sikaflex® -11 FC<sup>+</sup> as a glass sealer, 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® -11 FC<sup>+</sup> to seal swimming pools.

Consult our Technical Department before applying Sikaflex® -11FC<sup>+</sup> i Cure in joints with permanent water immersion.

**Do not mix with or expose uncured Sikaflex® -11 FC<sup>+</sup> to substances that may react with isocyanates, especially alcohols which are often components within e.g. thinners, solvents, cleaning agents and mould releasing compounds. Such contact could interfere or prevent the cross linking curing reaction of the material.**

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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.

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

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**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 Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

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**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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Sika Limited  
Watchmead  
Welwyn Garden City  
Hertfordshire  
AL7 1BQ  
United Kingdom  
Phone +44 1707 394444  
Telefax +44 1707 329129  
[www.sika.co.uk](http://www.sika.co.uk)  
email: [sales@uk.sika.com](mailto:sales@uk.sika.com)



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