

Sikaflex®-11 FC⁺

1-part elastic joint sealant and multipurpose adhesive

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, crack sealing 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

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

Construction



Product Data

Form

Appearance / Colours White, grey, brown, black, other colours to order

Packaging 310 ml cartridges
600 ml sausages (on request)

Storage

Storage Conditions / Shelf-Life 12 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.

Technical Data

Chemical Base 1-part polyurethane, moisture curing

Density ~ 1.3 kg/l

Skinning Time ~ 90 minutes (+23°C / 50% r.h.)

Curing Rate ~ 2 mm / 24h (+23°C / 50% r.h.)

Joint Dimensions Min. width = 10 mm / max width = 35 mm
The sealing of joints of widths less than 10mm may be possible providing the sealant remains within its stated movement capability MAF and all joints are designed in accordance with B.S 6093: 1993.

Sag Flow 0 mm, very good

Service Temperature -40°C to +80°C

Mechanical / Physical Properties

Tensile Strength ~ 1 to 1.2 N/mm²

Tear Strength ~ 8 N/mm²

Shore A Hardness ~ 35 after 28 days (+23°C / 50% r.h.)

E-Modulus ~ 0.5 N/mm² after 28 days (+23°C / 50% r.h.)

Elongation at Break > 600% after 28 days (+23°C / 50% r.h.)

Elastic Recovery > 80% after 28 days (+23°C / 50% r.h.)

Resistance

Chemical Resistance Resistant to water, seawater, diluted alkalis, cement grout and water dispersed detergent.

Not resistant to alcohols, organic acids, concentrated alkalis and concentrated acids, chlorinated (hydro-carbons) fuel.

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 : 0.5 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 are 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

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+ (Diameter =3cm; thickness = 0.4cm)
- In strips:
1 cartridge for 12 meters of Sikaflex®-11 FC+ with 5 x 5 mm cross section. On average 0.2 - 0.6 kg/m² 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

Non porous substrates:

E.g. metals, powder coatings etc. have to be cleaned with a fine abrasive pad and SikaCleaner-205 by using a clean towel / cloth.

After a flash off time of at least 15 min, apply SikaPrimer-3 N by using a brush.

Before sealing allow a flash off time of at least 15 min. (max. 8 hrs.).

For PVC use SikaPrimer-215.

Before sealing allow a flash off time of at least 15 min. (max. 8 hrs.).

Porous substrates:

E. g concrete, aerated concrete and cementitious renders, mortars, brick, etc. have to be primed with SikaPrimer-3 N by using a brush.

Before sealing allow a flash off time of at least 15 min. (max. 8 hrs.).

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 refer to the Sika® Primer table.

Application Conditions / Limitations

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

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

Substrate Moisture Content Dry

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

Application Instructions

Application Method / Tools

Sikaflex® -11 FC⁺ 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 into joint making sure that it is full contact with the side of the joint. Fill the joint, avoiding air entrapment. Sikaflex-11 FC 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. Smooth joint with smoothing liquid for a perfect sealant surface.

Bonding:

After substrate preparation apply Sikaflex® -11 FC⁺ 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⁺, i.e. after 24 to 48 hours at +23°C for a thickness between 2 to 3 mm.

Cleaning of Tools

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

Notes on Application / Limitations

Elastic sealants may not be over painted.

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 Department.

Do not use Sikaflex® -11 FC⁺ 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⁺ to seal swimming pools.

Please consult our Technical Department before applying Sikaflex® 11 FC⁺ in joints with permanent water immersion.

The freshly applied sealant has a smell similar to 'Marzipan' until it has fully cured (benzalehyde).

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.

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.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent Material 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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