

Sikaflex®-11 FC

One part advanced polyurethane, elastomeric sealant/adhesive

Product Description	Sikaflex-11 FC is a one-component, gun-grade, adhesive and sealing compound of permanent elasticity. This dual-purpose material is based on a special moisture-cured polyurethane with an accelerated curing time.
Uses	<p>As an elastic adhesive for:</p> <ul style="list-style-type: none"> ■ Cover plates, gaskets and coverings. ■ Acoustic ceiling tiles. ■ Floor moldings and door sills. ■ Wood or metal and door frames. ■ Roof tiles. <p>As an elastic joint sealer for:</p> <ul style="list-style-type: none"> ■ Air ducts and high vacuum systems. ■ Gaskets in openings in walls or floors for ducts, piling, etc ■ Reservoirs or water retaining structures. ■ Aluminum fabrication. ■ Containers, tanks, and silos. ■ Bolted lap joints.
Characteristics / Advantages	<ul style="list-style-type: none"> ■ Excellent adhesion on all cement-based materials, brick, ceramics, glass, metals, wood, epoxy, ■ Fast cure rate. ■ Good weathering and water resistance. ■ Non-corrosive. ■ Can be painted over with water, oil, and rubber-based paints. (Preliminary tests recommended). ■ High durability.
Tests	
Approvals / Standards	<p>Conforms to the requirements of ISEGA Certificate for foodstuff.</p> <p>Sikaflex 11 FC has been tested as per US EPA Method 24.</p> <p>Result: VOC Content is 28.5 g/L</p>
Product Data	
Form	
Appearance / Colours	Uniwhite, concrete grey, black
Packaging	<p>300 ml cartridges, 12 cartridges per box</p> <p>600 ml cartridges, 20 sausages per box</p>



Storage Conditions / Shelf-Life	12 months from date of production if stored in undamaged original sealed containers, in dry conditions and protected from direct sunlight at temperatures between +10°C and +25°C.
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Technical Data

Chemical Base	1-part polyurethane, moisture curing
Density	~ 1.3 kg/l (colour concrete grey) (DIN 53 4793)
Skinning Time	~ 60 minutes (+23°C / 50% r.h.)
Curing Rate	~ 3 mm/24h (+23°C / 50% r.h.)
Movement Capability	15%
Joint Dimensions	Min. width = 10 mm / max. width = 30 mm
Sag Flow	0 mm, very good (DIN EN ISO 7390)
Service Temperature	-40°C to +70°C

Mechanical / Physical Properties

Tear Strength	~ 7 N/mm (+23°C / 50% r.h.) (DIN 53 515)
Shore A Hardness	~ 40 – 45 after 28 days (+23°C / 50% r.h.) (ASTM C-719)
E-Modulus	~ 0.7 N/mm ² at 100% elongation (23°C / 50% r.h.) (DIN EN ISO 8340)
Elongation at Break	~ 400% (+23°C / 50% r.h.) (DIN 53 504)
Elastic Recovery	> 90% (+23°C / 50% r.h.) (ASTM C-719)

Resistance

Chemical Resistance	Resistant to water, seawater, diluted alkalis, cement grout and water dispersed detergents. Not resistant to alcohols, organic acids, concentrated alkalis and concentrated acids, chlorinated and aromatic (hydro-carbons) fuel.
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System Information

Application Details

Consumption / Joint Design	<p>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) must be maintained.</p> <p>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.</p> <p>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.)</p>
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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 m	~ 2.5 - 3.0 m	~ 1.8 m	~ 1.2 m	~ 0.8 m
Joint Length / 310 ml	~ 3 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

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	<p>Priming is not usually necessary for anodized aluminum, steel, non-absorbent materials such as glass, ceramics, stoneware and tiles</p> <p><i>Non porous substrates:</i> 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.).</p> <p><i>Porous substrates:</i> E. g concrete, aerated concrete and cementitious renders, mortars, brick, etc. have to be primed with SikaPrimer-3N by using a brush. Before sealing allow a flash off time of at least 15 min. (max. 8 hrs.).</p> <p>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.</p>
Application Conditions / Limitations	
Substrate Temperature	+5°C min. / +40°C max.
Ambient Temperature	+5°C min. / +40°C max.
Substrate Moisture Content	Dry
Application Instructions	
Application Method / Tools	<p>Sikaflex® -11FC is supplied ready to use.</p> <p>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 11FC 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.</p> <p>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.</p>
Cleaning of Tools	Clean all tools and application equipment with Sika® Remover-208 / Sika® TopClean-T immediately after use. Hardened / cured material can only be removed mechanically.
Notes on Application / Limitations	<p>Elastic sealants may not be over painted.</p> <p>Compatible coatings may cover the joint sides to max. 1 mm. The compatibility must be tested according to DIN 52 452-2.</p> <p>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.</p> <p>Before using on natural stone contact our Technical Service.</p> <p>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.</p> <p>Do not use Sikaflex® -11 FC to seal swimming pools.</p> <p>Not suitable for joints with water pressure or permanent water immersion.</p> <p>Do not mix with or expose uncured Sikaflex® -11 FC to substances that may react with isocyanates, especially alcohols which are often components within e.g. thinners, solvents, cleaning agents and formwork releasing compounds. Such contact could interfere or prevent the cross linking curing reaction of the material.</p>



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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