

BUILDING PRODUCT INFORMATION SHEET

Sikaflex[®]-11 FC

ONE-COMPONENT ADVANCED POLYURETHANE, ELASTIC JOINT SEALANT AND ADHESIVE

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 that meets ASTM C920 Type S, Grade NS, Class 12.5 for internal and external applications.

USES

As an elastic adhesive for:

- Cover plates, gaskets and coverings.
- Acoustic ceiling tiles.
- Floor moldings and door sills.
- Light weight construction materials.
- Wood or metal and door frames.
- Roof tiles.

As an elastic joint sealer for:

- Air ducts and high vacuum systems.
- Containers, tanks, and silos.
- Gaskets in openings in walls or floors for ducts, piling, etc.
- Reservoirs or water retaining structures.
- Aluminum fabrication.
- Bolted lap joints.

FEATURES

- Excellent adhesion to all cement-based materials, brick, ceramics, glass, metals, wood, epoxy, polyester and acrylic resin
- Fast cure rate
- Good weathering and water resistance
- Non-corrosive
- Can be over painted with water, oil, and rubber-based paints. (Preliminary tests recommended).
- High durability and ageing resistance
- High pick resistance

LIMITATIONS OF USE

The product is not a substitute for any mechanical fixings that are specified by the manufacturer of the element being bonded

A building element used for load bearing, bracing, structural support or other applications as defined in the NZBC, must be fastened in accordance with the specification / instructions from that elements manufacturer

If bonded elements require NZBC compliance, the maximum substrate moisture contents at the time of application must comply with E2/AS1 Paragraph 10.2

At least one of the bonding surfaces must be porous to enable the adhesive to cure effectively

For bonded elements requiring NZBC compliance only use in bonding applications that will remain dry.

PRODUCT INFORMATION

Product identifier	Sikaflex [®] -11 FC
Place of manufacture	Overseas
Composition	Polyurethane elastomer
Packaging	310 ml cartridge, 12 cartridges per box 600 ml foil pack (Grey Only), 20 foil packs per box

Shelf life	Twelve (12) months from the date of production, if it is stored in undamaged, original sealed packaging and if storage conditions are met.
Storage conditions	Store in dry conditions, where it is protected from direct sunlight and at temperatures between +5 °C and +25 °C
Colour	White, Grey, Black
Density	~1.2 kg/litre
Volatile organic compound (VOC) content	51.6 g/L

APPLICATION INFORMATION

Consumption	Joint length (m) per 600ml foil pack	Joint width (mm)	Joint depth (mm)
	6	10	10
	4	15	10
	3	20	10
	2	25	12
	1.3	30	15
Ambient air temperature	+5°C to +40°C. Sealant should be installed when joint is at mid-range of its anticipated movement.		
Backing material	Use closed cell polyethylene foam backing rods.		
Curing rate	Tack-free Time (TT-S-00230C)	1 to 2 hours depending on climate	
	Final Cure	3 to 5 days	

TECHNICAL INFORMATION

Shore A hardness	40-45	(+23 °C and 50 % R.H.) (ASTM D-2240)
Tensile strength	~1.55 N/mm ²	(+23 °C and 50 % R.H.) (ASTM D-412)
Tensile strain at break	600 %	(+23 °C and 50 % R.H.) (ASTM D-412)
Lap shear strength	1.13 N/mm ²	(23 °C and 50 % R.H.) (ASTM D-1002 modified, glass substrate)
Elastic recovery	>90 %	(+23 °C and 50 % R.H.) (ASTM C-719)
Service temperature	-20 °C to +70 °C	
Chemical resistance	Good resistance to water, weak acids, weak alkalis, sewerage, mineral oils, vegetable oils, fats, fuels. (Not resistant to organic solvents, paint thinner, strong acids, strong alkalis). Consult Technical Service for specific data.	
Resistance to weathering	Excellent	

MANUFACTURER AND IMPORTER INFORMATION

Manufacturer information	Address	Sika Japan Ltd Hiratsuka, Kanagawa 254-0021, Japan
Importer information	Address	Sika (NZ) Limited 85-91 Patiki Road Avondale, Auckland 1026

	New Zealand
Phone number	0800 745 269
Website	https://nzl.sika.com/
Email address	info@nz.sika.com
NZBN	9429000018791

BUILDING CODE INFORMATION

Building Code clauses

Note: This product is an adhesive and on its own is not within the scope of the NZ Building Code. However, when it is used as part of an internal floor, wall, or ceiling system, or with other building elements that must comply with the NZ Building Code, and it is used in accordance with that material supplier's specification and Sika's technical literature, it will contribute to meeting the requirements of the following clauses:

B1 Structure: Performance clauses B1.3.1, B1.3.2, B1.3.3 (a, b, j, q), B1.3.4

B2 Durability: Performance clauses B2.3.1 - (b) not less than 15 Years, (c) not less than 5 years

F2 Hazardous Building Materials: Performance clause F2.3.1

Building Code compliance statements

Performance B1.3.1, B1.3.2, B1.3.3 (a, b, j, q) B1.3.4: When used as an adhesive this product contributes to meeting the loading requirements that bonded lining elements are subjected to, as a result of self-weight, imposed in-use gravity loading, impact, and the effects of creep and shrinkage over time.

Performance B2.3.1 (b) 15 years and (c) 5 years: This product achieves these durability requirements and will remain serviceable for 15 years, or more, when installed and maintained in accordance with the relevant Sika technical literature. nzl.sika.com. According to Sika's "Service Improvement" records, maintained within its ISO9001:2015 Quality Management System, this product has performed successfully since it was introduced in 1999.

Performance F2.3.1: This product meets this requirement when used and applied in accordance with Sika's installation instructions and does not present a health hazard to people occupying or using the building. Refer to the Sika Product Technical Data sheet and product Safety Data Sheet nzl.sika.com for further information if required

BASIS OF PRODUCT DATA

All technical data in this document are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

IMPORTANT CONSIDERATIONS

- Allow 5 day cure at standard conditions when using Sikaflex®-11 FC in total water immersion applications.
- Sikaflex®-11 FC can be overpainted with most conventional coating and paint systems. However, paints must first be tested to ensure compatibility by carrying out preliminary trials. The best over-painting results are obtained when Sikaflex®-11 FC is allowed to fully cure. Note: non-flexible paint systems may impair the elasticity and lead to cracking of the paint film.
- Avoid exposure to high levels of chlorine. (Maximum level is 5ppm).
- Maximum depth of sealant must not exceed 12 mm, minimum depth is 6 mm when used as a joint sealant.
- Maximum expansion and contraction should not exceed 12.5 % of average joint width.
- Do not apply when moisture-vapor-transmission conditions exist from the substrate as this may cause bubbling.
- When applying sealant, air-entrapment must be avoided as this may cause bubbling.
- As Sikaflex®-11 FC is moisture-cured, ensure sufficient exposure to air.
- White tends to discolour / yellow slightly when exposed to ultraviolet rays.
- The ultimate performance of Sikaflex®-11 FC depends on proper application, good design and proper preparation of joint surfaces.
- Not for use in expansion joints.
- For very heavy components provide temporary support until Sikaflex®-11 FC has fully cured.
- Do not use on bituminous substrates, natural rubber, EPDM rubber or on any materials which might leach oils, plasticisers or solvents.
- Do not use to seal joints in and around swimming pools.
- Do not expose uncured Sikaflex®-11 FC to alcohol-containing products and solvent cleaners as this may interfere with the curing reaction.

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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.

APPLICATION INSTRUCTIONS

DESIGN REQUIREMENTS

There are no specific Sika design instructions for this product, when used as a general purpose adhesive. Refer to the product data sheet for general information at nzl.sika.com

If the building elements to be bonded are within the scope of the NZ Building Code then the bonding instructions of the manufacturer / supplier of those elements must be followed

SUBSTRATE PREPARATION

All surfaces must be structurally sound, clean, dry and free from grease, oil, wax, dust and surface contaminants such as curing compounds, release agents, coatings and friable material. Sikaflex®-11 FC adheres without primers and/or activators. However, for optimum adhesion and critical, high performance applications, such as on multi storey buildings, highly stressed joints, extreme weather exposure or water immersion, the following priming/or pre treatment procedures shall be followed.

Non-porous substrates: Aluminium, anodised aluminium, stainless steel, PVC, galvanised steel, powder coated metals or glazed tiles; slightly roughen surface with a fine abrasive pad. Clean and pre-treat using Sika® Aktivator- 205 applied with a clean cloth. Before bonding / sealing, allow a waiting time of > 15 minutes (< 6 hours). Other metals, such as copper, brass and titanium-zinc, clean and pre-treat using Sika® Aktivator-205 applied with a clean cloth. After a waiting time of > 15 minutes (< 6 hours). Apply Sika® Primer-3 N applied by brush. Allow a further waiting time of > 30 minutes (< 8 hours) before bonding / sealing. **Porous substrates:** Concrete, aerated concrete and cement based renders, mortars and bricks, prime surface using Sika® Primer-3 N applied by brush. Before bonding / sealing, allow a waiting time of > 30 minutes (< 8 hours). For more detailed advice and instructions contact Sika Technical Services. **Note:** Primers are adhesion promoters and not an alternative to improve poor preparation / cleaning of joint surfaces. Primers also improve the long term adhesion performance of the sealed joint.

CLEANING OF EQUIPMENT

Clean all tools and application equipment immediately after use with Sika® Remover-208 and / or Sika® Thinner C. Once cured, hardened material can only be removed mechanically. For cleaning skin use Sika® Everbuild Wonder Wipes.

APPLICATION

Masking: It is recommended to use masking tape where neat or exact joint lines are required. Remove the tape within the skin time after finishing.

Joint Backing: After the required substrate preparation, insert a suitable backing rod to the required depth.

Priming: Prime the joint surfaces as recommended in substrate preparation. Avoid excessive application of primer to avoid causing puddles at the base of the joint.

Application: Prepare the end of the cartridge before or after inserting into the sealant gun then fit the nozzle. Extrude Sikaflex®-11 FC into the joint ensuring that it comes into full contact with the sides of the joint and avoiding any air entrapment.

Finishing: As soon as possible after application, sealant must be firmly tooled against the joint sides to ensure adequate adhesion and a smooth the joint surface. Do not use tooling products containing solvents.

MAINTENANCE REQUIREMENTS

There are no maintenance requirements for this Sika product

The building element being bonded, and the bonding substrate must both be maintained in accordance with each of their manufacturers instructions

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.

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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

The building product/building product line is not subject to warning or ban under section 26 of the Building Act 2004.

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