

Sikaflex® Construction AP (previously known as Sikaflex® Construction J)

1-part polyurethane sealant for building joints

Construction

Product Description

Sikaflex® Construction AP is a one part, moisture curing, elastic joint sealant based on polyurethane. It is suitable for outdoor applications.

Uses

Sikaflex® Construction AP is used as a general purpose sealant for sealing joints in building construction such as movement and construction/isolation joints around windows and doors, facades, claddings, etc. in concrete, brick, wood, metal and PVC sections and structures, etc.

Characteristics / Advantages

- One component, ready to use
- Weather resistance, excellent aging resistance
- Movements capability: 25%
- Very good adhesion to many substrates
- Excellent workability
- High tear resistance
- Can be overpainted (subject to compatibility trials)

Tests

Approval / Standards ISO 11600 (Type F Class 25HM/20LM)

Product Data

Form

Colour White, concrete grey, black, beige

Packaging 600 ml sausages, 20 sausages per box

Storage

Storage Conditions / Shelf Life 12 months from the date of production if stored properly in undamaged original sealed packaging, 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	~ 1.30 kg/l (colour concrete grey)	(DIN 53479)
Skinning Time	1 ~ 2 hours (+23°C / 50% r.h.)	
Curing Rate	~ 3 mm / 24 hours (+23°C / 50% r.h.)	
Movement Capability	25%	
Joint Dimensions	Min. width = 10 mm / max. width = 35 mm	
Sag-Flow	0 mm; very good	(DIN EN ISO 7390)
Service Temperature	-40°C to +70°C	

Mechanical / Physical Properties

Tear Strength	> 6 N/mm (+23°C / 50% r.h.)	(DIN 53515)
Shore A Hardness	~ 30 after 28 days (+23°C / 50% r.h.)	(DIN 53505)
E-Modulus	~ 0.6 N/mm ² at 100% elongation (+23°C / 50% r.h.)	(DIN EN ISO 8340)
Elongation at Break	> 600% (+23°C / 50% r.h.)	(DIN 53504)
Elastic Recovery	> 85% (+23°C / 50% r.h.)	(DIN EN ISO 7389 B)

System Information

Application Details

Consumption / Joint Design

The joint 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 ~ 2 : 1 must be maintained.

Standard dimensions for concrete elements (as per DIN 18540, table 3)

Joint distance	2 m	2 - 3.5 m	3.5 - 5 m	5 - 6.5 m	6.5 - 8 m
Design joint width	15 mm	20 mm	25 mm	30 mm	35 mm
Min. joint width	10 mm	15 mm	20 mm	25 mm	30 mm
Joint depth	8 mm	10 mm	12 mm	15 mm	15 mm

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

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.

Approximate consumption:

Joint width	10 mm	15 mm	20 mm	25 mm	30 mm
Joint depth	8 mm	8 mm	10 mm	12 mm	15 mm
Joint length / 600 ml	~ 7.5 m	~ 4.5 m	~ 2.5 m	~ 1.6 m	~ 1.3 m

Backing Material: 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><i>Non porous substrates:</i> E.g. metals, powder coatings, etc. have to be cleaned with a fine abrasive pad and Sika® Cleaner-205 by using a clean towel/cloth. After a flash off time of at least 15 min, apply Sika® Primer-3 N by using a brush. Before sealing, allow a flash off time of at least 30 min. (max. 8 hrs). For PVC, use Sika® Primer-215. Before sealing, allow a flash off time of at least 30 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 Sika® Primer-3 N by using a brush. Before sealing, allow a flash off time of at least 30 min. (max. 8 hrs).</p> <p><u>Important note:</u> 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. / +35°C max.
Ambient Temperature	+5°C min. / +35°C max.
Substrate Humidity	Dry
Application Instructions	
Application Method / Tools	<p>Sikaflex® Construction AP 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 sausage into sealant gun and firmly extrude Sikaflex® Construction AP into joint making sure that it is full contact with the side of the joint. Fill the joint, avoiding air entrapment. Sikaflex® Construction AP 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 sealant remover / Sika® Colma Cleaner immediately after use. Hardened and/or cured material can only be mechanically removed.

Notes on Application / Limitations

Elastic sealant 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 Service.

Do not use Sikaflex® Construction AP as a glass sealer, on bituminous substrates, natural rubber, EPDM rubber or on building materials which might bleed oils, plasticizers or solvents which could attack the sealant.

Do not use Sikaflex® Construction AP to seal swimming pools.

Not suitable for joints with water pressure or permanent water immersion.

Only use in good ventilated areas.

The freshly applied sealant has a smell similar to "Amaretto" until it is fully cured (benzaldehyde).

Do not mix with or expose uncured Sikaflex® Construction AP to substrates 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.

To maintain maximum movement capacity, do not overcoat joint sealant completely – only the joint sides should be overcoated to maximum 1mm width. Should overcoating be necessary, trials must be carried out to observe adhesion, compatibility and drying behaviour of the coating.

For all overpaintable sealants, compatibility between the sealant and the paint type should be checked. This may be done by applying some sealant in an area exposed to sunlight, allowing it to cure and then overpainting the sealant with the proposed paint type. Check that the paint dries and then re-check after exposure to sunlight for 1-2 weeks. If the paint surface remains dry then compatibility is confirmed. This test is strongly recommended as the formulation of all paint types cannot be anticipated.

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.

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.

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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