

PRODUCT DATA SHEET

Sikaflex® Construction AP

1-PART POLYURETHANE SEALANT FOR BUILDING JOINTS

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 designed for movement and connection joints on porous substrates as well as indoor and outdoor general sealing applications.

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

APPROVALS / STANDARDS

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

PRODUCT INFORMATION

| | |
|---------------------------|--|
| Chemical base | 1-part polyurethane, moisture curing |
| Packaging | 600 ml sausages, 20 sausages per box. |
| Colour | White, concrete grey, black, beige |
| Shelf life | 12 months from date of production if stored in undamaged original sealed containers |
| Storage conditions | Sikaflex® Construction AP shall be stored in dry conditions, where it is protected from direct sunlight and at temperatures between +10°C and +25°C. |
| Density | ~ 1.30 kg/l (colour concrete grey) |

TECHNICAL INFORMATION

| | | |
|---|---|---------------------|
| Shore A Hardness | ~ 30 after 28 days (+23°C / 50% r.h.) | (DIN 53505) |
| Modulus of Elasticity in Tension | ~ 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) |
| Tear Strength | > 6 N/mm (+23°C / 50% r.h.) | (DIN 53515) |
| Movement Capability | 25 % | |
| Service temperature | -40 °C to +70 °C | |

Joint Design

Joint dimensions: Min. width = 10 mm / max. width = 35 mm

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 ~ 2 : 1 must be maintained.

Standard design dimensions for concrete elements as per DIN 18540 /table 3:

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

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

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

APPLICATION INFORMATION

| | | |
|-----------------------------------|------------------------------------|-------------------|
| Sag Flow | 0 mm (very good) | (DIN EN ISO 7390) |
| Ambient Air Temperature | +5 °C min. to +35 °C max. | |
| Substrate Temperature | +5 °C min. to +35 °C max. | |
| Substrate Moisture Content | Dry | |
| Curing time | ~ 3 mm/24 hours (+23°C / 50% r.h.) | |
| Skin time | ~ 4 hours (+23°C / 50% r.h.) | |

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

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

Non porous substrates: 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.).

Porous substrates: 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.).

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 METHOD / TOOLS

Sikaflex® Construction AP is supplied ready to use.

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.

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.
Sleek joint with smoothing liquid for a perfect sealant surface.

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 mechanically removed.

IMPORTANT CONSIDERATION

- 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 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 has fully cured (benzaldehyde).
- Do not mix with or expose uncured Sikaflex® Construction AP 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.

BASIS OF PRODUCT DATA

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 declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

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 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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