BUILDING TRUST

PRODUCT DATA SHEET

Sikaflex® AT Connection

Universal STP construction sealant for connection joints

DESCRIPTION

Sikaflex® AT Connection is an isocyanate free, silane terminated polymer sealant. It provides a waterproof, elastic seal with good mechanical properties over a wide range of temperatures.

USES

Sealing joints for:
- Movement and connection joints
- Facade elements
- Balconies
- Window and door frames
- Pre-cast elements
- Infill panels
- Cladding
- Curtain walling
- Interior and exterior use

CHARACTERISTICS / ADVANTAGES

- Moisture curing
- Isocyanate free
- Waterproof
- Good mechanical properties
- Resistant to weathering
- Good adhesion to porous and non-porous construction materials
- Elastic over a wide range of temperatures
- Movement capability ±25 % (ISO 9047)
- 1-part
- Low VOC emissions
- Primerless for most substrates

ENVIRONMENTAL INFORMATION

- Conformity with LEED v4 EQc 2: Low-Emitting Materials
- VOC emission classification GEV-Emicode EC1^{PLUS}, license number 1830/20.10.00

APPROVALS / STANDARDS

- CE Marking and Declaration of Performance to EN 15651-1 - Sealants for non-structural use in joints in buildings - Facade elements - F-EXT-INT CC
- CE Marking and Declaration of Performance to European Technical Assessment ETA 17/0980, based on EAD 350141-00-1106 - Fire stopping and fire sealing products, linear joint and gap seals
- ISO 11600-F Class 25HM, Sikaflex AT-Connection, SKZ, Report, No 102557/12-II
- Cleanroom Suitability Sikafloor®, Fraunhofer IPA, Report No. SI 1008-533

PRODUCT INFORMATION

Chemical Base	Silane terminated polymer
Packaging	300 ml cartridges — 12 cartridges per box 600 ml foil pack — 20 foil packs per box Refer to current price list for packaging variations
Colour	Colour range to be defined by local sales organisation.
Shelf Life	12 months from date of production
Storage Conditions	The product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +25 °C. Always refer to packaging.
Density	~1,30 kg/l (ISO 1183-1)
Product Declaration	EN 15651-1: F EXT-INT CC ISO 11600: F Class 25HM

TECHNICAL INFORMATION

Shore A Hardness	~24 (after 28 days) (ISO 868)
Secant Tensile Modulus	~0,40 N/mm² at 100 % elongation (23 °C) (ISO 8339) ~0,60 N/mm² at 100 % elongation (−20 °C)
Elastic Recovery	~70 % (ISO 37)
Elongation at Break	~450 % (ISO 37)
Tear Propagation Resistance	~4,5 N/mm (ISO 34)
Movement Capability	± 25 % (ISO 9047)
Resistance to Weathering	8 (ISO / DIS 19862)
Service Temperature	−40 °C to +70 °C
Joint Design	The joint dimensions must be designed to suit the movement capability of the sealant. The joint width must be a minimum of 10 mm and a maximum of 35 mm. A width to depth ratio of 2:1 must be maintained (for exceptions, see table below).

Typical joint dimensions for joints between concrete elements:

Joint distance [m]	Min. joint width [mm]	Min. joint depth [mm]
2	10	10
4	15	10
6	20	10
8	30	15
10	35	17

All joints must be correctly designed and dimensioned in accordance with the relevant standards and codes of practice before their construction. The basis for calculation of the necessary joint widths are the type of structure, dimensions, technical values of the adjacent building materials, joint sealing material and the specific exposure of the building and the joints.

For larger joints, contact Sika Technical Services for additional information.

APPLICATION INFORMATION

Consumption

Joint width [mm]	Joint depth [mm]	Joint length [m] per 600 ml foil pack
10	10	6
15	10	4
20	10	3
25	12	2
30	15	1,3

Consumption depends on the roughness and absorbency of the substrate. These figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level or wastage etc.

Backing Material	Use closed cell, polyethylene foam backing rods	
Sag Flow	0 mm (20 mm profile, +50 °C)	(ISO 7390)
Ambient Air Temperature	+5 °C to +40 °C	
Substrate Temperature	+5 °C to +40 °C, min. +3 °C above dew point temperature	
Curing Rate	~2 mm/24 hours (+23 °C / 50 % r.h.) * Sika Corporate Quality Procedure	(CQP* 049-2)
Skin Time	~60 minutes (23 °C / 50 % r.h.)	(CQP 019-1)
Tooling Time	~45 minutes (+23 °C / 50 % r.h.)	(CQP 019-2)

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.

FURTHER DOCUMENTS

- Pre-treatment Sealing and Bonding Chart
- Sika® Method Statement: Joint Sealing
- Sika® Method Statement: Joint Maintenance, Cleaning and Renovation
- Sika® Technical Manual: Facade Sealing

LIMITATIONS

- Sikaflex® AT Connection can be over-painted with most conventional facade paint coating systems. However, paints must first be tested to ensure compatibility by carrying out preliminary trials (e.g. according to ISO technical paper: Paintability and Paint Compatibility of Sealants). Optimum results are obtained when the sealant is allowed to fully cure first. Note: non-flexible paint systems may impair the elasticity of the sealant and lead to cracking of the paint coating. Depending on type of paint used, plasticiser migration may occur causing the paint to become surface 'tacky'.
- Colour variations may occur due to the exposure in service to chemicals, high temperatures and/or UV-radiation (especially with white colour shade). This effect is aesthetic and does not adversely influence the technical performance or durability of the product.
- Do not use on natural stone.
- Do not use for structural glazing or as a glass sealant.
- Do not use on bituminous substrates, natural rubber, EPDM rubber or on any building materials which might leach oils, plasticisers or solvents that could degrade the sealant.
- Do not use to seal joints in or around swimming pools.
- Do not use for joints under water pressure or for permanent water immersion.

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

SUBSTRATE PREPARATION

The substrate must be sound, clean, dry and free of all contaminants such as dirt, oil, grease, cement laitance, old sealants and poorly bonded paint coatings which could affect adhesion of the sealant. The substrate must be of sufficient strength to resist the stresses induced by the sealant during movement.
Removal techniques such as wire brushing, grinding, grit blasting or other suitable mechanical tools can be used.
All dust, loose and friable material must be completely

removed from all surfaces before application of any activators, primers or sealant.
Sikaflex® AT Connection adheres without primers and/or activators.
For optimum adhesion, joint durability and critical, high performance applications such as joints on multi-storey buildings, highly stressed joints, extreme weather and / or water exposure. The following priming and/or pre-treatment procedures must 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 sealing, allow a waiting time of > 15 minutes (< 6 hours).
Other metals, such as copper, brass and titanium-zinc, cleaned 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. Before sealing, allow a waiting time of > 30 minutes (< 8 hours)
PVC has to be cleaned and pre-treated using Sika® Primer-215 applied with a brush. Before sealing, allow a waiting time of > 30 minutes (< 8 hours).
Glass must be cleaned with Isopropanol before application

Porous substrates

Porous substrates must be primed using Sika® Primer-3 N applied by brush. For more details such as application and flash-off times, refer to the most recent Product Data Sheet of the respective pre-treatment product.
Before sealing, allow a waiting time of > 30 minutes (< 8 hours).
Adhesion tests on project specific substrates must be performed and procedures agreed with all parties before full project application.
For more detailed advice and instructions contact Sika Technical Services.

Note: Primers and activators are adhesion promoters and not an alternative to improve poor preparation / cleaning of the joint surface. Primers also improve the long term adhesion performance of the sealed joint.

MIXING

1-part ready to use

APPLICATION METHOD / TOOLS

Strictly follow installation procedures as defined in method statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

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

If required, 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

Sikaflex® AT Connection is supplied ready to use.
Prepare the end of the foil pack or cartridge, insert into the sealant gun and fit the nozzle. Extrude Sikaflex® AT Connection 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 finish.
Use a compatible tooling agent to smooth the joint surface. Water can be used. Do not use tooling products containing solvents.

CLEANING OF TOOLS

Clean all tools and application equipment immediately after use with Sika® Remover-208. Hardened material can only be removed mechanically. For cleaning skin, use Sika® Cleaning Wipes-100.

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.

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 recommenda-

tions. 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.

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