BUILDING TRUST

PRODUCT DATA SHEET

Sikaflex® Construction AP+

HIGH PERFORMANCE ELASTIC JOINT SEALANT

DESCRIPTION

Sikaflex® Construction AP+ is a 1-component, moisture curing polyurethane elastic joint sealant. It is used for durably sealing connection and movement joints in concrete and masonry facades and as a general purpose construction sealant.

USES

Sikaflex® Construction AP+ is used for sealing and weatherproofing joints in the building envelope and is used for the following applications.

- Interior or exterior joint sealing
- Around window and door frames
- Around precast elements
- Around prefabricated elements
- Floor and wall construction joints
- Pavements, decks and bridges

FEATURES

- Excellent application properties for extrusion and tooling
- Movement capability of ± 25% (ASTM C 719)
- Bubble free curing technology
- Good adhesion to many substrates
- Non-sag on vertical and soffit joints up to 30 mm width

SUSTAINABILITY

- Green Building Council of Australia Green Star Design & As Built V1.3-13.1.1B
- Green Building Council of Australia Green Star Interiors V1.3-12.1.1B

CERTIFICATES AND TEST REPORTS

- ASTM C 920 Class 25

PRODUCT INFORMATION

Composition	Sika *i*-Cure® Polyurethane	
Packaging	600 ml cylindrical foil pack 20 foil packs per box	
Colour	Black, Concrete Grey, White	
Shelf life	12 months from the 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. Refer to the current Safety Data Sheet for information on safe handling and storage.	
Density	1.25 kg/l	(ISO 1183-1)
Product declaration	ASTM C 920-18	Type S, Grade NS, Movement Class 25, Use M
Green building	41 grams per litre as VOC content	

TECHNICAL INFORMATION

Shore A hardness	~35 (after 28 days)	(EN ISO 868)
Secant tensile modulus	At +23°C and 60% elongation 0.30 N/mm²	
Tensile strain at break	~800%	(ISO 37)
Elastic recovery	~70%	(ISO 7389)
Tear propagation resistance	~6.0 N/mm	(ISO 34-2)
Movement capability	± 25%	(ASTM C 719)
Service temperature	Maximum +70 °C Minimum −40 °C	
Joint design	For movement joints, the width must be at least 8 mm and should not exceed 40 mm. For non movement joints such as connection joints in interior areas, the joint width can be less than 8 mm. The joint dimensions must be designed to suit the movement capability of the sealant. In all cases joints must be at least 8 mm deep, or have a width to depth ratio of 1 : 0.5 for facade joints or 1 : 0.80 for floor joints, which ever is greater. For more information about joint design and calculations refer to the Sika document Design guideline: Dimensioning of construction joints or contact Sika Technical Services.	

APPLICATION INFORMATION

Consumption

Joint width	Joint depth	Joint length per 600 ml foil pack
10 mm	8 mm	7.5 lm
15 mm	8 mm	5.0 lm
20 mm	10 mm	3.0 lm
25 mm	12 mm	2.0 lm
30 mm	15 mm	1.3 lm

Backing material	Use closed cell, polyethylene foam backing rod.	
Sag flow	2 mm (20mm profile), tested at +50°C	(EN ISO 7390)
Material temperature	Maximum +40°C Minimum +5°C	
Ambient air temperature	Maximum +40°C Minimum +5°C	
Substrate temperature	Maximum +40°C Minimum +5°C Note: The substrate temperture muust be +3°C above dew point temperature and free from frost and ice.	
Curing rate	2mm / 24 hours	At +23°C and 50% R.H (CQP 049-2)
Skinning time	120 minutes	At +23°C and 50% R.H (CQP 019-1)
Tooling time	100 minutes	At +23°C and 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 DOCUMENTATION

- Pre-treatment Sealing & Bonding Chart
- Method Statement Joint Sealing
- Method Statement Joint Maintenance, Cleaning and Renovation
- Sika® Additional Technical Information: Dimensioning of construction joints

IMPORTANT CONSIDERATIONS

- Do not use on stone substrates. Staining from plasticiser migration may occur when used on cast, reconstituted or natural stone substrates.
- Do not use on polyethylene (PE), polypropylene (PP), polytetrafluoroethylene (PTFE/Teflon), and certain plasticised synthetic materials. Preliminary trials are recommended or contact Sika® Technical Services.
- 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 the to seal joints in and around swimming pools.
- Do not use for joints under water pressure or for permanent water immersion
- Before bonding or sealing, check adhesion and compatibility of paints and coatings by carrying out preliminary trials.
- Sikaflex® Construction AP+ can be overpainted with most conventional water-based coating and paint systems. However, paints must first be tested to ensure compatibility by carrying out preliminary trials.
- Do not expose to alcohol containing products during the curing period as this may interfere with the curing reaction and cause the Sikaflex® Construction AP+ to remain soft and/or tacky.
- The best over-painting results are obtained when the sealant/adhesive is allowed to fully cure first. Note: non-flexible paint systems may impair the elasticity of the sealant/adhesive and lead to cracking of the paint film.
- Colour variations may occur due to the exposure in service to chemicals, high temperatures and/or UV radiation (especially white colour shade). This effect is aesthetic and does not adversely influence the technical performance or durability of the product.

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 coatings which could affect adhesion of the primer and sealant. The substrate should be of sufficient strength to withstand with the stress induced by the sealant during movement.
Use techniques such as wire brushing, grinding, grit blasting or other suitable mechanical methods to remove all weak substrate material. Repair all damaged joint edges with suitable Sika® repair products.
Remove all dust, loose and friable material from all surfaces before application activators, primers or sealant.
For optimum adhesion and joint durability of critical, high performance applications such as joints on multistorey
buildings, highly stressed joints and extreme weather exposure the following priming and/or pretreatment procedures must be followed:

NON-POROUS SUBSTRATES

Aluminium, anodised aluminium, stainless steel, galvanised steel or glazed tiles

- Lightly roughen the surface with a fine abrasive pad.
- Clean the surface.
- Pretreat the surface using Sika® Aktivator-205 applied with a clean cloth.

Other metals, such as brass, bronze, copper and titanium-zinc

- Lightly roughen the surface with a fine abrasive pad.
- Clean the surface.
- Pretreat the surface using Sika® Aktivator-205 with aclean cloth.
- Allow a waiting time.
- Apply Sika® Primer-3 N by brush.

Powder-coated metals

- Perform preliminary trials to verify adhesion. For more information contact Sika® Technical Services.

PVC

- Clean and prime the surface using Sika® Primer-215 applied with a brush.

POROUS SUBSTRATES

Concrete, aerated concrete and cement based renders, mortars and bricks.

IMPORTANT: Avoid excessive application of primer causing puddles.

- Prime surface using Sika® Primer-3 N applied by brush.

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
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 foil pack before or after inserting into the sealant gun then fit the nozzle. Extrude Sikaflex® Construction AP+ 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 (e.g. Sika® Tooling Agent N) to smooth the joint surface. Do not use tooling products containing solvents.

CLEANING OF EQUIPMENT

Clean all tools and application equipment immediately after use with Sika® Remover-208. Once cured, hardened material can only be removed mechanically. For cleaning skin use Sika® Cleaner-350H.

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.

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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