Construction

Sikaflex® Construction+

1-part Flexible Sealant for Concrete and Masonry Facades

Product Description / Uses	Sikaflex® Construction+ is a 1-part, moisture curing, elastic joint sealant suitable for movement and connection joints in facades.
Characteristics / Advantages	■ Very good weathering- and ageing resistance ■ Movement capability of ±35 (ASTM C719) ■ Bubble-free curing ■ Low stress to the substrate ■ Easy to smooth and very good workability ■ Good adhesion to many substrates ■ Solvent free and odourless ■ Very low emissions ■ Suitable for use in hot and tropical climatic conditions ■ Innovative surface: - slightly structured when dry tooled - smooth when wet tooled
Approvals / Standards	Conforms to EN15651-1 class 25 HM Conforms to ISO 11600 F 25 HM Conforms to ASTM C920 class 35 EMICODE EC 1 PLUS R, very low emission

Specific Ratings

LEED® EQc 4.1	SCAQMD, Rule 1168	BAAQMD, Reg. 8, Rule 51
passes	passes	passes

Technical Data

Colours	white, beige, brown, black, concrete grey, medium grey, dark grey, grey 5057 further colours available upon request	
Chemical Base	i-Cure® technology polyurethane	
Density	1.44 kg/l approx.[2)]	(CQP[1)] 006-4, ISO 1183-1)
Sag Flow	0 mm	(CQP 061-4, ISO 7390)
Skin Time	65 minutes approx.[2)]	(CQP 019-1)
Tooling Time	50 minutes approx.	
Curing Rate	3 mm/24 h approx.[2)]	(CQP 049-2)
Movement Capability	25% ±35 %	(ISO 9047) (ASTM C719)
Shore A Hardness	28 after 28 days approx.[2)]	(CQP 023-1, ISO 868)
Tensile Strength	0.9 N/mm^2 approx.[2)]	(CQP 036-1, ISO 37)
Tear Propagation Resistance	5.0 N/mm approx.[2)]	(CQP 045-1, ISO 34)
E-Modulus	0.45 N/mm^2 approx. at 100% elongation[2)]	(CQP 555-1, ISO 8339)
Elongation at Break	800% approx.[2)]	(CQP 036-1, ISO 37)
Elastic Recovery	> 90%[2)]	(ISO 7389)
Application Temperature	+5 °C to +40 °C	
Service Temperature	-40 °C to +70 °C	
Packaging	600 ml foil pack, 20 foil packs per box, 960 foil packs per pallet	
Storage Conditions / Shelf-Life	15 months from date of production if stored in undamaged original sealed containers, in dry conditions and protected from direct sunlight at temperatures between +5 °C and +25 °C.	

[1)] Sika Corporate Quality Procedure

[2)] 23 °C / 50% r.h.

Application Details

Joint Design/ Consumption

The joint width must be designed to suit the movement capability of the sealant. In general the joint width should be > 10 mm and < 40 mm. A width to depth ratio of approx. 2:1 must be maintained.

Standard design dimensions for concrete elements as per DIN 18 540 /table 3:

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

All joints must be properly designed and dimensioned in accordance with the relevant standards before construction. Basis for calculation of the necessary joint width are the technical values of the joint sealant and the adjacent building materials, as well as the exposure of the building, type of construction and its dimensions.

Approximate consumption

Joint width [mm]	10	15	20	25	30
Joint depth [mm]	8	8	10	12	15
Joint length / 600 ml [m]	7.5	5	3	1.6	1.3

Backing: Use closed cell, polyethylene foam backing rods.

Substrate Preparation / Priming

Surfaces must be clean, dry and free from oil, grease and dust, loose or friable particles. Cement laitance has to be removed. Grinding the surface of non-porous substrates with an abrasive pad very fine may improve the adhesion performance.

Non- porous substrates

Glazed tiles, powder coated metals, aluminium, anodised aluminium, stainless steel and galvanised steel have to be treated with an abrasive pad very fine and Sika® Aktivator-205 using a clean towel. Before sealing allow a flash-off time of at least 15 min.

All metal surfaces not mentioned above have to be treated with an abrasive pad very fine and Sika® Primer-3 N using a clean brush or roller. Before sealing allow a flash-off time of at least 30 min. (max. 8 h).

PVC has to be pre-treated with Sika® Primer-215 by using a clean brush. Before sealing allow a flash-off time of at least 30 min (max. 8 h).

Porous substrates

Concrete, aerated concrete and cementitious renders, mortars, brick, natural stone etc. have to be primed with Sika® Primer-3 N by using a clean brush or roller. Before sealing allow a flash-off time of at least 30 min. (max. 8 h).

Primers are adhesion promoters. They neither substitute the correct cleaning of the surface nor improve its strength significantly. Primers improve the long term performance of a sealed joint.

For further information please contact our Technical Service.

Application Method / Tools

Sikaflex® Construction+ is supplied ready to use

After suitable substrate preparation, insert backing rod to the required depth and apply primer if necessary. Insert foil pack into sealant gun and extrude Sikaflex® Construction+ into joint making sure that it is in full contact with the sides of the joint and avoid air entrapment. Sikaflex® Construction+ must be tooled firmly against joint sides to ensure good adhesion.

Masking tape may be used where exact joint lines or exceptionally neat lines are required. Remove the tape within the skin time.

If Sikaflex® Construction+ is dry-tooled it shows a slightly structured, concrete-like surface. If it is wet-tooled (by using a compatible tooling agent e.g. Sika® Tooling Agent N) it shows a smooth surface.

Do not use solvent containing products as tooling agents!

Cleaning of Tools

Clean all tools and application equipment with Sika® Remover-208 / Sika® TopClean-T immediately after use. Once cured the material can only be removed mechanically.

Further Documents available

- Material Safety Data Sheet (MSDS)
- Pre-treatment Chart Sealing & Bonding
- Method Statement Joint Sealing
- Method Statement Joint Maintenance, Cleaning and Renovation
- Technical Manual Facade Sealing

Notes on Application / Limitations

Sikaflex® Construction+ can be over-painted with most conventional paint systems. The paint must be tested for compatibility by carrying out preliminary trials and the best results are obtained if the sealant is allowed to cure fully first. Please note that non-flexible paint systems may impair the elasticity of the sealant and lead to cracking of the paint film.

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+ on bituminous substrates, natural rubber, EPDM rubber or on building materials which might bleed oils, plasticisers or solvents which could attack the sealant. Do not use Sikaflex® Construction+ to seal swimming pools. Sikaflex® Construction+ is not suitable for joints with water pressure or permanent water immersion.

Do not expose uncured Sikaflex® Construction+ to alcohol containing products as they may interfere with the curing reaction.

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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Responsible Care

Certified Quality System ISO 9001/EN 29001 since 1986