

PRODUCT DATA SHEET

Sikaflex® Universal

FLEXIBLE SEALANT FOR GENERAL PURPOSE SEALING



DESCRIPTION

Sikaflex® Universal is a 1-component, moisture-curing, elastic joint sealant.

USES

Sikaflex® Universal is designed for general purpose use in movement and connection joints in building constructions.

CHARACTERISTICS / ADVANTAGES

- Movement capability of ± 25 (ASTM C 719)
- Good adhesion to porous substrates
- Good application properties

APPROVALS / CERTIFICATES

- ASTM C 920 class 25
- EN 15651-1 F EXT-INT CC 12.5
- ISO 11600 F 12.5 E

PRODUCT INFORMATION

Chemical base	Polyurethane
Packaging	300 ml cartridges, 20 cartridges per box
Colour	Concrete grey PC, white PC, beige PC
Shelf life	Sikaflex® Universal has a shelf life of 12 months from the date of production, if it is stored in undamaged, original, sealed packaging, and if the storage conditions are met.
Storage conditions	Sikaflex® Universal shall be stored in dry conditions, protected from direct sunlight and at temperatures between +5 °C and +25 °C.
Density	~ 1.60 kg/l (ISO 1183-1)

TECHNICAL INFORMATION

Shore A Hardness	~ 43 (after 28 days)	(ISO 868)
Secant Tensile Modulus	~ 0.60 N/mm ² at 60% elongation (23 °C)	(ISO 8339)
Elongation at Break	~ 300%	(ISO 37)
Elastic Recovery	~ 90%	(ISO 7389)
Tear Propagation Resistance	~ 9.5 N/mm	(ISO 34)
Movement Capability	$\pm 25\%$ $\pm 12.5\%$	(ASTM C 719) (ISO 9047)

Service Temperature -40 °C to +70 °C

Joint Design

The joint width must be designed to suit the joint movement required and the movement capability of the sealant. The joint width shall be ≥ 10 mm and ≤ 30 mm. In general a width to depth ratio of 2:1 must be maintained.

Standard joint widths for joints between concrete elements

Joint distance [m]	Min. joint width [mm]	Min. joint depth [mm]
2	15	10
4	30	15

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

For larger joints please contact our Technical Service Department.

APPLICATION INFORMATION

Consumption	Joint length [m] per 600 ml foil pack	Joint width [mm]	Joint depth [mm]
	6	10	10
	4	15	10
	3	20	10
	2	25	12
	1.3	30	15

Backing Material	Use closed cell, polyethylene foam backing rods.		
Sag Flow	< 3 mm (20 mm profile, 50°C)		(ISO 7390)
Ambient Air Temperature	+5 °C min. / +50 °C max., min. 3 °C above dew point temperature		
Substrate Temperature	+5 °C min. / +50 °C max.		
Curing Rate	~2 mm/24 hours (23 °C / 50% r.h.)		(CQP 049-2)
Skin time	~ 90 minutes (23 °C / 50% r.h.)		(CQP 019-1)
Tooling Time	~ 85 minutes (23 °C / 50% r.h.)		(CQP 019-2)

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

The substrate must be clean, dry, sound and homogeneous, free from oils, grease, dust and loose or friable particles. Sikaflex® Universal adheres without primers and/or activators. However, for optimum adhesion and critical, high performance applications, such as on multi-story buildings, highly stressed joints, and/or extreme weather exposure, the following priming and/or pre-treatment procedures shall be followed:

Porous substrates

Concrete, aerated concrete and cement based renders, mortars and bricks shall be primed using Sika® Primer-3 N applied with a brush. Before sealing, allow a flash-off time of > 30 minutes (< 8 hours).

For more detailed advice and instructions please contact the local Sika Technical Services Department.

Note: Primers are adhesion promoters. They are neither a substitute for the correct cleaning of a surface, nor do they improve the strength of the surface significantly.

APPLICATION METHOD / TOOLS

Sikaflex® Universal is supplied ready to use. After the necessary substrate preparation, insert a suitable backing rod to the required depth and apply any primer if necessary. Insert a cartridge into the sealant gun and extrude Sikaflex® Universal into the joint making sure that it comes into full contact with the sides of the joint and avoids any air entrapment. Sikaflex® Universal sealant must be firmly tooled against the joint sides to ensure adequate adhesion. It is recommended to use masking tape where exact joint lines or neat lines are required. Remove the tape within the skin time. If Sikaflex® Universal is dry-tooled it shows a slightly structured, concrete-like surface. If it is wet-tooled (us-

ing a compatible tooling agent, e.g. Sika® Tooling Agent N) it shows a smooth surface.

Do not use tooling products containing solvents.

CLEANING OF TOOLS

Removal of fresh remnants from tools and application equipment can be carried out using Sika® Remover-208 immediately after use. Once cured, residual material can only be removed mechanically.

FURTHER DOCUMENTS

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

LIMITATIONS

- Sikaflex® Universal can be overpainted with most conventional facade coating paint 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). The best over-painting 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 film.
- Colour variations may occur due to exposure to chemicals, high temperatures and/or UV-radiation (especially with the colour shade white PC). However, a change in colour is purely of aesthetic nature and does not adversely influence the technical performance or durability of the product.
- Do not use Sikaflex® Universal on natural stone.
- Do not use Sikaflex® Universal on bituminous substrates, natural rubber, EPDM rubber or on any building materials which might bleed oils, plasticizers or solvents that could attack the sealant.
- Do not use Sikaflex® Universal to seal joints in and around swimming pools.
- Do not use Sikaflex® Universal for joints under water pressure or for permanent water immersion.
- Do not expose uncured Sikaflex® Universal to alcohol containing products as this may interfere with the curing reaction.

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 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.

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.

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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