BUILDING TRUST

PRODUCT DATA SHEET

Sikaflex®-428 Precast

Flexible sealant for concrete precast

DESCRIPTION

Sikaflex®-428 Precast is a 1-component, moisture-curing, elastic joint sealant.
Suitable for use in hot and tropical climatic conditions.

USES

Sikaflex®-428 Precast is designed for movement and connection joints between concrete precast elements, GRC and GRP parts. It is also suitable for masonry, concrete and block work joints, roof joints and terminations.
Sikaflex®-428 Precast is used for interior and exterior applications.

FEATURES

- Good resistance to weathering
- Movement capability of ±25 % (ASTM C719)
- UV stabilized
- Good application properties
- Water resistant
- Over paintable
- Low VOC content

SUSTAINABILITY

Certified according "Low Emitting Materials as per Al Sa'fat - Dubai Green Building Evaluation System" by Dubai Central Laboratory (DCL)

CERTIFICATES AND TEST REPORTS

- ASTM C920 (class 25)
- VOC test report (USEPA method 24)
- VOC Emission Test Report (CDPH)

PRODUCT INFORMATION

Composition	Silane-Terminated Polyurethane	
Packaging	600 mL foil pack, 20 foil packs per box	
Colour	White, concrete grey and beige (other colors on request)	
Shelf life	Sikaflex®-428 Precast 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®-428 Precast shall be stored in dry conditions, where it is protected from direct sunlight and at temperatures between +5 °C and +25 °C.	
Density	~1.15 kg/l	(ISO 1183-1)
Volatile organic compound (VOC) content	< 45 g/l	(US EPA Method 24)

TECHNICAL INFORMATION

Shore A hardness	30 (± 5, after 28d)	(CQP023-1/ ASTM C661)
Tensile strength	~1 N/mm²	(ASTM D412)
Elongation	~300 %	(CQP036-1 / ASTM D412)
Movement capability	±25%	(ASTM C719)
Service temperature	-40 °C min. / +80 °C max.	

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 ≤ 50 mm. A width to depth ratio of 2 : 1 must be maintained (for exceptions, see table below).

Standard joint widths for joints between concrete element:
(Movement capability: ±25 % (ASTM C719) and ΔT: 80 °C)

Joint distance [m]	Min. joint width [mm]	Min. joint depth [mm]
2	10	10
4	16	10
6	24	12
8	30	15
10	38	19

For larger joints following depth should be maintained:

Joint width [mm]	Joint depth [mm]
40	20
45	21
50	22

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 more detailed advice and instructions please contact our Technical 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
0.8	45	20

Backing material	Use closed cell, polyethylene foam backing rods or bond braker tapes.	
Sag flow	Non-sag	(ASTM C639)
Ambient air temperature	+5 °C min. / +45 °C max. (min. 3 °C above dew point temperature)	
Substrate temperature	+5 °C min. / +45 °C max.	
Curing rate	~4 mm/24 h (23 °C / 50 % r.h.)	(CQP 049-2)
Skinning time	~50 min (23 °C / 50 % r.h.)	(CQP 019-1)

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

FURTHER DOCUMENTATION

- Pre-treatment Chart Sealing and Bonding
- Method Statement Joint Sealing

IMPORTANT CONSIDERATIONS

Overpainting the sealant:
- The Product can be overpainted with most conventional paint coating systems.
- Tacky paint due to plasticiser migration
- Paints and sealants or adhesives may contain plasticizers and other substances that migrate and can cause the painted surface to become tacky.
- Allow the Product to fully cure before overpainting.
- Before overpainting, carry out preliminary trials to test compatibility of the paint or coating system with the Product in accordance with ISO/TR 20436:2017 - Buildings and civil engineering works - Sealants - Paintability and paint compatibility of sealants

Cracking paint due to joint movement:
- Rigid paint applied on top of a sealant or flexible adhesive may crack when used on joints subject to movement.
- Colour variations may occur due to exposure to chemicals, high temperatures and/or UV-radiation (especially with the colour shade white). 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®-428 Precast on natural stone.
- Do not use Sikaflex®-428 Precast 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®-428 Precast to seal joints in and around swimming pools.
- Do not use Sikaflex®-428 Precast for joints under water pressure or for permanent water immersion.
- Do not expose uncured Sikaflex®-428 Precast to alcohol containing products as this may interfere with the curing reaction.

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

Sikaflex®-428 Precast generally has strong adhesion without primers or activators to most clean, dry and sound precast concrete substrates.
The substrate must be clean, dry, sound and homogeneous, free from oils, grease, dust and loose or friable particles. Sikaflex®-428 Precast 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 (< 4 hours).
For more detailed advice and instructions please contact our Technical 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®-428 Precast 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 foil pack or cartridge into the sealant gun and extrude Sikaflex®-428 Precast into the joint making sure that it comes into full contact with the sides of the joint and avoid any air entrapment. Sikaflex®-428 Precast 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® Precast is dry-tooled it shows a slightly structured, concrete-like surface. If it is wet-tooled (using a compatible tooling agent, example Sika® Tooling Agent N) it shows a smooth 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, residual material can only be removed mechanically.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

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.

Sika Gulf B.S.C. (c)
Tel: +973 177 38188
Email: info@bh.sika.com
Sika Kuwait Cons. Mat. & Paints Co WLL
Tel: +965 22 282 296
Email: sika.kuwait@kw.sika.com
Web: gcc.sika.com

Sika UAE LLC
Sika MB Construction Chemicals LLC
Sika International Chemicals LLC
Tel: +971 4 439 8200
Email: info@ae.sika.com
Web: gcc.sika.com

Sika Saudi Arabia Limited
Sika Construction Chemicals for Manufacturing LLC
Riyadh / Jeddah / Dammam / Rabigh
Tel: +966 9200 22167
Email: info@sa.sika.com
Web: gcc.sika.com

Sika LLC - Oman
Sika MB LLC
Tel. +968 22 826 500
Email: info@om.sika.com
Web: gcc.sika.com