PRODUCT DATA SHEET

# Sikaflex®-140 Construction

## Joint sealant for building joints

## DESCRIPTION

Sikaflex®-140 Construction is a moisture-curing, elastic joint sealant.

## USES

Sealing joints for:
- Movement and connection joints
- Horizontal and vertical movement and connections
- Facade elements

The product can be used on various substrates. Refer to 'Substrate Preparation' section for compatible substrates.

Please note:
- The Product may be used for interior and exterior applications.

## CHARACTERISTICS / ADVANTAGES

- Movement capability of ± 25 % (ASTM C 719)
- Bubble-free curing
- Good workability
- Good adhesion to many substrates

## ENVIRONMENTAL INFORMATION

- LEED v2009 IEQc 4.1: Low-Emitting Materials - Adhesives and Sealants

## APPROVALS / STANDARDS

- ASTM C920-11 class 25

## PRODUCT INFORMATION

| | |
|---|---|
| Composition | i-Cure® Technology polyurethane |
| Packaging | 600 ml cylindrical foil pack: 20 foil packs per box |
| Shelf Life | 12 months from the date of production |
| Storage Conditions | The product must be stored in original, unopened and undamaged packaging in dry conditions at temperatures between +5 °C and +25 °C. Always refer to packaging. |
| Colour | Colour range to be defined by local sales organization. |
| Density | ~1.45 kg/l (ISO 1183-1) |

## TECHNICAL INFORMATION

| | | |
|---|---|---|
| Shore A Hardness | ~36 (after 28 days) | (ISO 868) |
| Secant Tensile Modulus | ~0.30 N/mm² at 60 % elongation (+23 °C) | (ISO 8339) |
| Elongation at Break | ~800 % | (ISO 37) |
| Movement Capability | ± 25 % | (ASTM C 719) |

| | | |
|---|---|---|
| **Elastic Recovery** | ~70 % | (ISO 7389) |
| **Tear Propagation Resistance** | ~6.0 N/mm | (ISO 34) |
| **Service Temperature** | −40 °C min. / +70 °C max. | |

**Joint Design**

The joint widths must be designed to suit the movement capability of the sealant. The joint width must be a minimum of 6 mm and a maximum of 35 mm. A width to depth ratio of 2:1 must be maintained. Joint widths less than 10 mm are generally for interior connection joints or crack control joints and therefore considered as non-movement joints.

Interior connection joints or crack control joints are considered non-movement joints.

Example for typical joint dimensions for joints between concrete elements for exterior applications considering 25 % movement capability according to ASTM C 719:

| Joint distance | Minimum joint width | Maximum joint width |
|---|---|---|
| 2 m | 10 mm | 10 mm |
| 4 m | 10 mm | 15 mm |
| 6 m | 10 mm | 20 mm |
| 8 m | 15 mm | 30 mm |
| 10 m | 17 mm | 35 mm |

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 joint design and calculations contact Sika® technical Services for additional information.

## APPLICATION INFORMATION

**Consumption**

| Joint width | Joint depth | Joint length per 600 ml |
|---|---|---|
| 10 mm | 10 mm | 6 m |
| 15 mm | 10 mm | 4 m |
| 20 mm | 10 mm | 3 m |
| 25 mm | 12 mm | 2 m |
| 30 mm | 15 mm | 1.3 m |

These figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level, wastage or any other variations. Apply product to a test area to calculate the exact consumption for the specific substrate conditions and proposed application equipment.

| | | |
|---|---|---|
| **Sag Flow** | ~2 mm (20 mm profile, +50 °C) | (ISO 7390) |
| **Ambient Air Temperature** | +5 °C min. / +40 °C max. | |
| **Substrate Temperature** | +5 °C min. / +40 °C max.<br>Minimum +3 °C above dew point temperature | |
| **Backing Material** | Use closed cell, polyethylene foam backing rod. | |
| **Curing Rate** | ~2 mm / 24 hours (+23 °C / 50 % r.h.)<br>*Sika Corporate Quality Procedure | (CQP* 049-2) |
| **Skin Time** | ~120 minutes (+23 °C / 50 % r.h.) | (CQP 019-1) |
| **Tooling Time** | ~100 minutes (+23 °C / 50 % r.h.) | (CQP 019-2) |

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## 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 INFORMATION

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

## IMPORTANT CONSIDERATIONS

- Sikaflex®-140 Construction 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. 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 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 permanent water immersion.
- Do not expose uncured Sikaflex®-140 Construction 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

#### Priming / pre-treatment
Note: For more details of the primer or pre-treatment products such as application, flash-off and waiting times, refer to the individual Product Data Sheet. Contact Sika Technical Services for additional information.
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. Note: 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.

- The substrate must be sound, clean, dry and free of all contaminants such as dirt, oil, grease, cement laitance, old sealants, poorly bonded paint coatings or friable particles which could affect adhesion of the sealant.
- The substrate must be of sufficient strength to resist the stresses induced by the sealant during movement.
- Use wire brushing, abrading, grinding or grit blasting equipment to prepare the surface.
- Repair all damaged joint edges with suitable Sika repair products
- New or refurbished joints must be saw-cut.
- Where joints in substrate are saw cut. After sawing, all slurry material, must be flushed away and joint surfaces allowed to dry.
- All dust, loose and friable material must be completely removed from all surfaces before application of any activators, primers or sealant.

For optimum adhesion, joint durability and critical, high performance applications such as joints on multi-storey buildings, highly stressed joints, extreme weather exposure or water immersion / exposure. The following priming and/or pre-treatment procedures must be carried out:

**Non-porous substrates**
Aluminium, anodised aluminium, stainless steel, PVC, galvanised steel, powder coated metals, PVDF coated metals and glazed tiles:
1. Lightly roughen the substrate with a fine abrasive pad.
2. Clean and pre-treat with  Sika® Aktivator-205, Sika® Aktivator-100 or Sika® Cleaner P applied with a clean cloth.

Copper, brass and titanium-zinc:
1. Lightly roughen the substrate with a fine abrasive pad.
2. Clean and pre-treat with  Sika® Aktivator-205 applied with a clean cloth.
3. Wait until the flash-off time has been achieved.
4. Apply Sika® Primer-3 N with a brush.

PVC
1. Clean and pre-treated with Sika® Primer-215 applied by brush.

**Porous substrates**
Note: Concrete that is 2–3 days old, or with a matt-wet (surface dry), must be primed using Sika® Primer-3 N applied by brush.
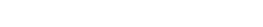Concrete, aerated concrete, cement-based renders, mortars and brick:
1. Apply Sika® Primer-3 N or Sika® Primer-115 by brush.

### MIXING

1-part ready to use

### APPLICATION METHOD / TOOLS

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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 skinning 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
Note: It is recommended to use masking tape where neat or exact joint lines are required. Remove the tape within the skinning time after finishing.

1. Cut the top off the cartridge before or after inserting into the sealant gun.
2. Fit the nozzle onto the cartridge or sealant gun body.
3. Cut the nozzle to the required bead size.
4. Extrude the product around the tile ensuring that it comes into full contact with the sides and avoiding any air entrapment.

### Finishing
Note: Do not use tooling products containing solvents.

1. As soon as possible after application, firmly tool the sealant against the joint sides to ensure adequate adhesion and a smooth finish.
2. Use a compatible tooling agent (e.g. Sika® Tooling Agent N) to smooth the joint surface. Water can be used.

## CLEANING OF TOOLS

Clean all tools and application equipment with Sika® Remover-208 immediately after use. Hardened material can only be removed mechanically.

## 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 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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