

PRODUCT DATA SHEET

Sikaflex® PRO-3

POLYURETHANE SEALANT FOR FLOOR JOINTS AND CIVIL ENGINEERING APPLICATIONS

DESCRIPTION

Sikaflex® PRO-3 is a 1-part, polyurethane, tough, coloured, elastic joint sealant for sealing many types of joint configurations in floors and civil engineering structures. It provides a waterproof seal with good mechanical properties, is resistant to chemicals and remains elastic over a wide range of temperatures.

USES

Horizontal and vertical interior and exterior sealing joint applications:

- Food industry
- Cleanrooms
- Sewage treatment plants
- Tunnels

Sealing horizontal and vertical joints for:

- Floors
- Pedestrian and traffic areas
- Car park parking decks
- Warehouse and production floor areas

CHARACTERISTICS / ADVANTAGES

- Movement capability $\pm 35\%$
- Good mechanical and chemical resistance
- Bubble-free curing
- Over-paintable
- Good adhesion to defined construction materials
- Very low emissions

ENVIRONMENTAL INFORMATION

- Conformity with LEED v4 EQc 2: Low-Emitting Materials
- VOC emission classification GEV-Emicode EC1^{PLUS}, license number 3206/20.10.00

APPROVALS / STANDARDS

- CE Marking and Declaration of Performance to EN 15651-4 - Sealants for non-structural use in joints in buildings - Sealants for pedestrian walkways. Classification: PW EXT-INT CC 25 HM
- CE Marking and Declaration of Performance to EN 14188-2 - Joint fillers and sealants - Cold applied joint sealants
- Chemical Resistance. DIN EN 14187, SKZ, Test report No. 127980/17-IV
- Performance Test EN 15651-4, SKZ, Report, 94931/11-I-E
- Biological Resistance, ISO 846, Fraunhofer, Certificate, No SI 1103-544
- Cold applied sealants, EN 14188-2, SKZ, Report, No 94931/11-IV
- Determination of staining, ASTM C 1248-04, SKZ, Report, No 98947/11-V
- Determination of staining, ISO 16938-1, SKZ, Report, No 98947/11-II
- ISO 11600 F-class 25 HM, SKZ, Report, No 94931/11-II
- Standard specification for elastic joint sealants, ASTM C920-11 Class 35, ASTM, Report, No 0314920-SIKA
- Migration behaviour EN 1186, EN 13130, CEN/TS 14234, ISEGA, Certificate No. 48644 U 18
- Outgassing TVOC, CSM procedures, Fraunhofer, Certificate, No SI 1103-544
- Resistance against diesel and jet fuel, DIBt Guidelines, SKZ, Test report No. 94931/11-V
- Sealants in waste water systems, DIBt Guidelines, SKZ, Report, No 94931/11-III
- Water Regulations, BS 6920, UKAS, Report, No M 106170



PRODUCT INFORMATION

| | | |
|----------------------------|--|-----------------------|
| Product Declaration | EN 15651-4: PW EXT-INT CC 25 HM EN 14188-2 - Joint fillers and sealants - Cold applied joint sealants | |
| Chemical Base | Polyurethane i-Cure® Technology | |
| Packaging | 300 ml cartridge | 12 cartridges per box |
| | 600 ml cylindrical foil pack | 20 foil packs per box |
| | Refer to current price list for packaging variations | |
| Shelf Life | 15 months from 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. | |
| Colour | Colour range to be defined by local sales organisation | |
| Density | ~1.35 kg/l | (ISO 1183-1) |

TECHNICAL INFORMATION

| | | |
|------------------------------------|---|--------------|
| Shore A Hardness | ~37 (after 28 days) | (ISO 868) |
| Secant Tensile Modulus | ~0.60 N/mm ² at 100 % elongation (+23 °C) | (ISO 8339) |
| | ~1.10 N/mm ² at 100 % elongation (-20 °C) | |
| Elongation at Break | ~600 % | (ISO 37) |
| Movement Capability | ± 25 % | (ISO 9047) |
| | ± 35 % | (ASTM C 719) |
| Elastic Recovery | ~90 % | (ISO 7389) |
| Tear Propagation Resistance | ~8.0 N/mm | (ISO 34) |
| Service Temperature | -40 °C to +70 °C | |
| Chemical Resistance | For chemical resistance refer to the following report: Chemical Resistance. DIN EN 14187, Sikaflex® PRO-3 (SL), SKZ, Report, 127980/17-IV For resistance against water and salt water refer to the following report: Performance Test EN 15651-4, Sikaflex® PRO-3, SKZ, Report, 94931/11-I-E | |

Joint Design

The joint width must be designed to suit the movement capability of the sealant. The joint width must be ≥ 10 mm and ≤ 40 mm. A width to depth ratio of 1:0.8 must be maintained (for exceptions, see table below).

Typical joint widths for joints between concrete elements for interior applications

| Joint distance [m] | Minimum joint width [mm] | Minimum joint depth [mm] |
|--------------------|--------------------------|--------------------------|
| 2 | 10 | 10 |
| 4 | 10 | 10 |
| 6 | 10 | 10 |
| 8 | 15 | 12 |
| 10 | 18 | 15 |

Typical joint widths for joints between concrete elements for exterior applications

| Joint distance [m] | Minimum joint width [mm] | Minimum joint depth [mm] |
|--------------------|--------------------------|--------------------------|
| 2 | 10 | 10 |
| 4 | 15 | 12 |
| 6 | 20 | 17 |
| 8 | 28 | 22 |
| 10 | 35 | 28 |

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 larger joints, contact Sika® Technical Services for additional information.

APPLICATION INFORMATION

| Consumption | Joint length [m] per 600 ml | Joint width [mm] | Joint depth [mm] |
|-------------|-----------------------------|------------------|------------------|
| | 6 | 10 | 10 |
| | 3.3 | 15 | 12 |
| | 1.9 | 20 | 16 |
| | 1.2 | 25 | 20 |
| | 0.8 | 30 | 24 |

| | | |
|--------------------------------|---|--------------|
| Sag Flow | 0 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. Minimum +3 °C above dew point temperature | |
| Backing Material | Use closed cell, polyethylene foam backing rod | |
| Curing Rate | ~3.5 mm/24 hours (+23 °C / 50 % r.h.) * Sika Corporate Quality Procedure | (CQP* 049-2) |
| Skin Time | ~60 minutes (+23 °C / 50 % r.h.) | (CQP 019-1) |
| Tooling Time | ~50 minutes (+23 °C / 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 DOCUMENTS

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

LIMITATIONS

- Sikaflex® PRO-3 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 (e.g. according to ISO technical paper: Paintability and Paint Compatibility of Sealants). 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.
- For application on reconstituted, cast or natural stone, preliminary trials must be carried out to check if the stone experiences plasticiser migration. For a suitable primer to prevent plasticiser migration, 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 to seal joints in and around swimming pools.

- Do not expose uncured Sikaflex® PRO-3 to alcohol containing products as this may interfere with the curing reaction.

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 clean, dry, sound and free from oils, grease, dust, cement laitance and loose or friable particles.

Removal techniques such as wire brushing, grinding, grit blasting or other suitable mechanical tools can be used.

Damaged joint edges can be repaired with suitable Sika repair products.

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 followed:

Non-porous substrates

Aluminium, anodised aluminium, stainless steel, PVC, galvanised steel, powder coated metals or glazed tiles. Slightly roughen surface with a fine abrasive pad.

Clean and pre-treat using Sika® Aktivator-205 applied with a clean cloth.

Before sealing, allow a waiting time of > 15 minutes (< 6 hours).

Other metals, such as copper, brass and titanium-zinc, clean and pre-treat using Sika® Aktivator-205 applied with a clean cloth. After a waiting time of > 15 minutes (< 6 hours). Apply Sika® Primer-3 N applied by brush. Before sealing, allow a waiting time of > 30 minutes (< 8 hours)

PVC has to be cleaned and pre-treated using Sika® Primer-215 applied with a brush. Before sealing, allow a waiting time of > 30 minutes (< 8 hours).

Porous substrates

Concrete, aerated concrete and cement-based renders, mortars and bricks surfaces must be primed using Sika® Primer-3 N or Sika® Primer-210 applied by brush.

Before sealing, allow a waiting time of > 30 minutes (< 8 hours).

Adhesion tests on project specific substrates must be performed and procedures agreed with all parties before full project application.

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. Contact Sika® Technical Services for additional information.

MIXING

1-part ready to use

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 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

Sikaflex® PRO-3 is supplied ready to use.

Prepare the end of the foil pack or cartridge, insert into the sealant gun and fit the nozzle. Extrude Sikaflex® PRO-3 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. Water can be used. Do not use tooling products containing solvents.

CLEANING OF TOOLS

Clean all tools and application equipment with Sika® Remover-208 immediately after use. Hardened material can only be removed mechanically. For cleaning skin, use Sika® Cleaning Wipes-100.

Product Data Sheet

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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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