BUILDING TRUST

PRODUCT DATA SHEET

Sikaflex® PRO-3 Purform®

Polyurethane sealant for floor joints and civil engineering applications

PRODUCT DESCRIPTION

Sikaflex® PRO-3 Purform® is a 1-part, moisture curing, elastic polyurethane sealant. It seals many kinds of joint configurations in floors and civil engineering structures. The elasticity is maintained over a wide temperature range and high mechanical and chemical resistance provides good durability.

USES

Horizontal and vertical interior and exterior joint sealing applications:
- Food industry
- Cleanrooms
- Warehouse and production floor areas
- Sewage treatment plants
- Tunnels
- Car parks
- Pedestrian and traffic areas

CHARACTERISTICS / ADVANTAGES

- High movement capability: +/-25 % (ISO11600) and ±50 % (ASTM C920)
- Fast development of mechanical properties
- High mechanical and chemical resistance
- High resistance to weathering
- Good durability
- Non-staining to a wide range of substrates
- Very low monomer content: no user safety training needed (REACH restriction 2023, Annex 17 entry 74)
- Bubble-free curing
- Good adhesion to most construction materials

ENVIRONMENTAL INFORMATION

- Conformity with LEED v4 EQc 2: Low-Emitting Materials
- VOC emission classification GEV-Emicode EC1^{PLUS}, licence number 11289/20.10.00

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 Class 35- Joint fillers and sealants - Cold applied joint sealants
- Tensile Properties, Adhesion, Change of Volume tests ISO 11600 F Class 25 HM, Sikaflex® PRO-3 Purform, SKZ, Test Report No. 205279/19-I
- Standard Specification for Elastomeric Joint Sealants, ASTM C 920, Sikaflex® PRO-3 Purform, Test report No. 1725T0005
- Chemical Resistance, DIN EN 14187, Sikaflex® PRO-3 Purform, SKZ, Report No. 208323/20
- Determination of the staining, ASTM 1248-04, Sikaflex® PRO-3 Purform, SKZ, Test Report No.205279/19-VI
- Determination of the staining ISO16938-1 Sikaflex® PRO-3 Purform, SKZ, Test Report No.205279/19-III
- Chemical Resistance, Adhesion and cohesion Change of Weight, DIBT: 2003-03, Sikaflex® PRO-3 Purform, SKZ, Test Report No. 205279/19-V
- Outgassing VOC/SVOC, CSM procedures, Sikaflex® PRO-3 Purform, Fraunhofer, Certificate, No. SI 1909-1140
- Testing of joint sealant, ISO 11618, Sikaflex® PRO-3 Purform, SKZ, Test Report No. 205279/19-VII
- Sealants -Durability to extension compression, ISO 19862, Sikaflex® PRO-3 Purform, SKZ, Test Report No. 213916/20-I
- Migration Behaviour EN 1186, EN 13130, CEN/TS 14234, Sikaflex® PRO-3 Purform, ISEGA, Certificate No. 54313 U 21

PRODUCT INFORMATION

Product Declaration	EN 15651-4: PW EXT-INT CC 25 HM EN 14188-2: Class 35
Chemical Base	Purform® Polyurethane Technology
Packaging	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	Black and Concrete Grey
Density	~1,30 kg/l (ISO 1183-1)

TECHNICAL INFORMATION

Shore A Hardness

80 % of final hardness	Time
+5 °C	6 days
+10 °C	5 days
+23 °C	2 days
+40 °C	1 day

Secant Tensile Modulus	~0,65 N/mm² at 100 % elongation (+23 °C) (ISO 8339) ~1,00 N/mm² at 100 % elongation (−20 °C)
Elongation at Break	~800 % (ISO 37)
Movement Capability	± 25 % (ISO 9047) ± 35 % (EN 14188-2) ± 50 % (ASTM C 719)
Elastic Recovery	~90 % (ISO 7389)
Tear Propagation Resistance	~9,0 N/mm (ISO 34)
Service Temperature	-40°C min. / +80°C max.
Chemical Resistance	Resistant to many chemicals. Refer to EN 14187-6 SKZ test report for chemical resistance and EN 15651-4 SKZ test report for water and salt water. Contact Sika Technical Services for additional information.
Resistance to Weathering	High resistance to weathering (10 cycles) (ISO 19862)

Joint Design

- The joint dimensions must be designed to suit the movement capability of the sealant. The joint width must be a minimum of 10 mm and a maximum of 40 mm.
- A width to depth ratio of 1:0,8 for floor joints must be maintained (for exceptions, see table below).
- For larger joints, contact Sika ® Technical Services for additional information.

Example for typical joint widths for joints between concrete elements for interior applications considering 25 % movement capability according to EN 15651-4:

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

Example for typical joint widths for joints between concrete elements for exterior applications considering 25 % movement capability according to EN 15651-4:

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 details of joint design and calculations refer to the following document, Sika® Additional Technical Information: Dimensioning of construction joints.

Compatibility

- Non-staining on many natural stones according to ASTM 1248-04 / ISO 16938-1.
- To confirm suitability, tests must be carried out according to ISO 16938-1/ ASTM 1248-04 before using on natural stones and full project application.

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	~50 minutes (+23 °C / 50 % r.h.)	(CQP 019-1)
Tooling Time	~40 minutes (+23 °C / 50 % r.h.)	(CQP 019-2)

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.

FURTHER DOCUMENTS

- Pre-treatment Sealing and Bonding Chart
- Sika® Method Statement: Joint Sealing
- Sika® Method Statement: Joint Maintenance, Cleaning and Renovation
- Sika® Additional Technical Information: Dimensioning of construction joints

LIMITATIONS

- Sikaflex® PRO-3 Purform® 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 Purform® 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

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

- 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 removal techniques such as wire brushing, grinding, grit blasting or other suitable mechanical tools.
- Repair all damaged joint edges 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.

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: For more details of the pre-treatment products such as application and flash-off times, refer to the individual Product Data Sheet.
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 or glazed tiles: Lightly roughen surface with a fine abrasive pad. Clean and pre-treat using Sika® Aktivator-205 applied with a clean cloth.
- Metals, such as copper, brass and titanium-zinc, must be cleaned and pre-treated using Sika® Aktivator-205 applied with a clean cloth. Allow the pre-treatment to achieve the required waiting time before applying Sika® Primer-3 N by brush.
- PVC must be cleaned and pre-treated using 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-115 applied by brush.

- Concrete, aerated concrete and cement-based renders, mortars and bricks surfaces must be primed using Sika® Primer-3 N or Sika® Primer-115 applied by brush.

Asphalt (acc. to EN 13108-1 and EN 13108-6)
- Fresh cut or existing cut asphalt must have a clean bonding surface with minimum 50% exposed aggregate and must be primed using Sika® Primer-115 or Sika® Primer-3 N applied by brush.

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
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 Purform® is supplied ready to use.
Note: Allow the primer or pre-treatment product, if applied, to achieve the required waiting time before sealing the joint.
1. Cut the top of the foil pack or 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 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.

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.

SIKA LIMITED
Watchmead
Welwyn Garden City
Hertfordshire, AL7 1BQ
Tel: 01707 394444
Web: www.sika.co.uk
Twitter: @SikaLimited