BUILDING TRUST

PRODUCT DATA SHEET

Sikaflex® PRO-3 Purform®

Purform sealant for floor joints and civil engineering applications

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

The Product is used for the following horizontal and vertical interior and exterior joint sealing applications:
- Food industry
- Clean rooms
- Warehouse and production floor areas
- Sewage treatment plants
- Tunnels
- Car park decks
- Pedestrian and traffic areas

CHARACTERISTICS / ADVANTAGES

- High movement capability: ±25 % (ISO 9047), ±50 % (ASTM C719)
- Fast development of mechanical properties
- High mechanical resistance
- Extended application range to lower temperatures
- High chemical resistance
- High resistance to weathering
- Non-staining to a wide range of substrates
- Monomeric diisocyanate content <0.1 %: no user safety training needed (REACH restriction 2023, Annex XVII entry 74)
- Bubble-free curing
- Good adhesion to many construction materials

SUSTAINABILITY

- LEED v4 EQ credit: Low-emitting materials
- VOC emission classification GEV Emicode EC1^{plus}
- DGNB 2020 Quality Level 4 (Indicator 11 and 13)
- EPD

APPROVALS / CERTIFICATES

- CE marking and declaration of performance based on EN 15651-4:2012 Sealants for non-structural use in joints in buildings and pedestrian walkways — Part 4: Sealants for pedestrian walkways
- CE marking and declaration of performance based on EN 14188-2:2004 Joint fillers and sealants — Part 2: Specifications for cold applied sealants
- Tensile Properties, Adhesion, Change of Volume tests ISO 11600 F Class 25 HM
- Standard Specification for Elastomeric Joint Sealants, ASTM C 920
- Chemical Resistance, DIN EN 14187, SKZ, Report No. 208323/20
- Determination of the staining, ASTM 1248-04, SKZ, Report No.205279/19-VI
- Waste water, DIBt, SKZ, Test Report No. 205279/19-V
- Testing of joint sealant for pedestrian walkways ISO 11618, SKZ, No. 205279/19-VII
- Sealants -Durability to extension compression, ISO 19862,Sikaflex® PRO-3 Purform
- Foodstuff and migration behaviour EN 1186, EN 13130, CEN/TS 14234, ISEGA, No. 54313 U 22
- Drinking water Sikaflex PRO-3 Purform BS6920 J0942 A1
- Radon Transmission Testet
- Outgassing VOC/SVOC, CSM* procedures, Fraunhofer, Certificate, No. SI 1909-1140

* Cleanroom Suitable Material

Sikaflex® PRO-3 Purform® | Documents

PRODUCT INFORMATION

Product declaration

- EN 15651-4: PW EXT-INT CC 25 HM
- EN 14188-2: Class 35
- ISO 11600. Class 25 HM F
- ASTM C 920 – Type S, Grade NS, Movement Class 50 Use T1, Use NT, Use I Class 2, Use M ASTM C 920 – Type S, Grade NS, Movement Class 50 Use T1, Use NT, Use I Class 2, Use M ASTM C 920 – Type S, Grade NS, Movement Class 50 Use T1, Use NT, Use I Class 2, Use M ASTM C 920 – Type S, Grade NS,Movement Class 50, Use T1, Use NT, Use I Class 2, Use M
- Waste water test according to DIBT guidlines
- ISEGA certificate

Composition

Sika® Purform® Polyurethane Technology

Packaging

300 ml cartridge	12 cartridges per box
600 ml cylindrical foil pack	20 foil packs per box

Refer to the current price list for available 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

~1.30 kg/l (ISO 1183-1)

SYSTEM INFORMATION

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.

TECHNICAL INFORMATION

Shore A hardness

~~40 (after 28 days) (EN ISO 868)

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)

Tensile strain at break

~800 % (ISO 37)

Movement capability

± 25 % (EN ISO 9047)
± 35 % (EN 14188-2)
± 50 % (ASTM C719)

Elastic recovery

~90 % (EN ISO 7389)

Tear propagation resistance

~9.0 N/mm (ISO 34-2)

Service temperature

Maximum	+80°C
Minimum	-40°C

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 wa-

	ter. 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.
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 adjacent building materials
- Joint sealing material
- The specific exposure of the building and the joints

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	Minimum joint width	Minimum joint depth
2 m	10 mm	10 mm
4 m	10 mm	10 mm
6 m	10 mm	10 mm
8 m	15 mm	12 mm
10 m	18 mm	15 mm

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

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

For details of joint design and calculations refer to the following document, Sika® Design guidlines: Dimensioning of construction joints.

APPLICATION INFORMATION

Consumption

Joint width	Joint depth	Joint length per 600 ml foil pack
10 mm	10 mm	6 m
15 mm	12 mm	3.3 m
20 mm	16 mm	1.9 m
25 mm	20 mm	1.2 m
30 mm	24 mm	0.8 m

Sag flow

0 mm (20 mm profile, +50 °C) (EN ISO 7390)

Material temperature

Maximum	+40 °C
Minimum	+5 °C

Ambient air temperature

Maximum	+40 °C
Minimum	0 °C

For applications at temperatures below +5 °C, please contact Sika Technical Services.

Substrate temperature

Maximum	+40 °C
Minimum	0 °C

Note: The substrate temperature must be +3 °C above dew point temper-

	ature and free from frost and ice.
Backing material	Use closed cell, polyethylene foam backing rod
Curing rate	~3.5 mm/24 hours (+23 °C / 50 % r.h.)
Skinning time	~50 minutes (+23 °C / 50 % r.h.)
Tooling time	~40 minutes (+23 °C / 50 % r.h.)

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

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

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

IMPORTANT
Bituminous, natural rubber or EPDM rubber substrates
Do not use the Product on any building materials which might leach oils, plasticisers or solvents that could degrade the sealant.
Primers are adhesion promoters and not an alternative to improve poor preparation / cleaning of the joint surface.
Note: Primers also improve the long term adhesion performance of the sealed joint.

Substrate testing
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 and poorly bonded coatings which could affect adhesion of the sealant.
The substrate should be of sufficient strength to cope with the stresses induced by the sealant during movement. Removal techniques such as wire brushing, grinding, grit blasting or other suitable mechanical tools must be used. Repair all damaged joint edges with suitable Sika repair products. All dust, loose and friable material must be completely removed from all surfaces before application of any activators, primers or sealant.
Where joints in the substrate are saw cut. After sawing, all slurry material must be flushed away and joint surfaces allowed to dry.
For optimum adhesion, joint durability and critical, high performance applications such as joints on multi-storey buildings, highly stressed joints, extreme weather exposure the following priming and/or pre-treatment procedures must be followed:
NON-POROUS SUBSTRATES
Aluminium, anodised aluminium, stainless steel, galvanised steel, powder coated metals, or glazed tiles.
1. Lightly roughen the surface with a fine abrasive pad.
2. Clean and pre-treat using Sika® Aktivator-205 applied with a clean cloth.

Other metals, such as copper, brass and titanium-zinc.
1. Lightly roughen the surface with a fine abrasive pad.
2. Clean and pre-treat using Sika® Aktivator-205 with a clean cloth.
3. Wait until the flash off time has been achieved.
4. Apply Sika® Primer-3 N by brush.

PVC substrates.
1. Clean and pre-treat using Sika® Primer-215 applied with a brush.

POROUS SUBSTRATES
Concrete that is 2–3 days old, or matt wet (surface dry) .
1. Prime surface using Sika® Primer®-115 applied by brush.

Concrete, aerated concrete and cement based renders, mortars and bricks.
1. Prime surface using Sika® Primer-3 N or Sika® Primer-115 applied by brush.

Reconstituted, cast or natural stone.
1. 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 for further information.

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.
1. Prime surface using Sika® Primer-3 N or Sika® Primer-115 applied by brush.

Note: For more details of the primer or pre-treatment products refer to the individual Product Data Sheet. Contact Sika Technical Services for additional information.

MIXING

1-part ready to use

APPLICATION

IMPORTANT
Strictly follow installation procedures
Strictly follow installation procedures as defined in Method Statements, application manuals and working instructions which must always be adjusted to the actual site conditions.
IMPORTANT
Swimming pools
Do not use to seal joints in and around swimming pools.
IMPORTANT
Exposure to alcohol during curing
Do not expose the Product to alcohol containing products during the curing period as this may interfere with the curing reaction.

1. Apply masking tape where neat or exact joint lines are required. Remove the tape within the skinning time of the Product after finishing.
2. After the required substrate preparation, insert a backing rod to the required depth.
3. Prime the joint surfaces as recommended in substrate preparation. Avoid excessive application of primer to avoid causing puddles at the base of the joint.
4. The Product is supplied ready to use. Prepare the end of the foil pack or cartridge, insert into the sealant gun and fit the nozzle. Extrude the Product into the joint ensuring that it comes into full contact with the sides of the joint and avoiding any air entrapment.
5. IMPORTANT Do not use tooling products containing solvents. As soon as possible after application, tool the sealant firmly against the joint sides to ensure adequate adhesion and a smooth finish. Use a compatible tooling agent such as Sika® Tooling Agent N to smooth the joint surface.

Painting the sealant
Note: The Product can be painted with most conventional paint coating systems. However, paints must first be tested to ensure compatibility by carrying out preliminary trials (according to the 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
Note: Colour variations may occur due to the exposure in service to chemicals, high temperatures 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.

CLEANING OF EQUIPMENT

Clean all tools and application equipment immediately after use with Sika® Remover-208. Once cured, 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 declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

LEGAL NOTES

Any information or suggestions for use concerning Sika's products, which we either in writing or orally have given buyers or end-users of the product, have been given in good faith based on our own experiences and based on approved praxis and the technological and scientific knowledge on the time of giving such suggestions and information, which are given without any type of guarantees, and which do not lead to any further responsibility from Sika Danmark A/S, besides what is stated in the sales agreement in question. The buyer or end-user should themselves investigate or otherwise make sure, that our products are suitable for the use in question and further make sure that the products are kept and used correct and in agreement with the published rules and considering the actual conditions in order to avoid damages or less satisfactory results. Any order is accepted and any deliverance is affected according to the general terms of sales and delivery from Sika Danmark A/S, which are considered known and accepted, and which could be handed out when asked for. Our catalogues are not up-dated automatically. The present product data sheet is only for use in Denmark. Values stated in the present product data sheet should be seen as recommended, unless stated otherwise.

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