

## PRODUCT DATA SHEET

# Sikaflex® PRO-3 Purform®

Polyurethane 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:  $\pm 25\%$  (ISO 9047),  $\pm 50\%$  (ASTM C719)
- Fast development of mechanical properties
- High mechanical resistance
- Extended application range to lower temperatures
- Resistance against diesel and super gasoline
- High chemical resistance to specific chemicals
- 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

### ENVIRONMENTAL INFORMATION

- Conforms with LEED v4 EQ credit: Low-emitting materials
- VOC emission classification GEV Emission EC1<sup>plus</sup>

### APPROVALS / STANDARDS

- 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
- Outgassing VOC/SVOC, CSM procedures, Fraunhofer, Certificate, No. SI 1909-1140
- 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
- AS/NZS 4020:2018 - Potable drinking water approved

## TECHNICAL INFORMATION

<b>Shore A Hardness</b>	~~40 (after 28 days)		
	<b>80 % of final hardness</b>	<b>Time</b>	(EN ISO 868)
	+5 °C	6 days	
	+10 °C	5 days	
	+23 °C	2 days	
	+40 °C	1 day	
<b>Secant Tensile Modulus</b>	~0.65 N/mm <sup>2</sup> at 100 % elongation (+23 °C) ~1.00 N/mm <sup>2</sup> at 100 % elongation (-20 °C)		(ISO 8339)
<b>Elongation at Break</b>	~800 %		(ISO 37)
<b>Elastic Recovery</b>	~90 %		(EN ISO 7389)
<b>Tear Propagation Resistance</b>	~9.0 N/mm		(ISO 34-2)
<b>Movement Capability</b>	± 25 %		(EN ISO 9047)
	± 35 %		(EN 14188-2)
	± 50 %		(ASTM C719)
<b>Chemical Resistance</b>	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.		
<b>Resistance to Weathering</b>	High resistance to weathering (10 cycles)		(ISO 19862)
<b>Service Temperature</b>	Maximum	+80°C	
	Minimum	-40°C	

### 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 guidelines: Dimensioning of construction joints.

<b>Contact with water</b>	Potable Water Approved	(AS/NZS 4020:2018)
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## PRODUCT INFORMATION

<b>Product Declaration</b>	<ul style="list-style-type: none"> <li>▪ EN 15651-4: PW EXT-INT CC 25 HM</li> <li>▪ EN 14188-2: Class 35</li> <li>▪ ISO 11600. Class 25 HM F</li> <li>▪ 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</li> <li>▪ Waste water test according to DIBT guidelines</li> <li>▪ ISEGA certificate</li> </ul>
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<b>Chemical Base</b>	Sika® Purform® Polyurethane Technology
<b>Packaging</b>	600 ml cylindrical foil pack 20 foil packs per box
<b>Shelf Life</b>	15 months from date of production
<b>Storage Conditions</b>	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.
<b>Colour</b>	Concrete grey
<b>Density</b>	~1.30 kg/l (ISO 1183-1)

## SYSTEM INFORMATION

<b>Compatibility</b>	<ul style="list-style-type: none"> <li>▪ Non-staining on many natural stones according to ASTM 1248-04 / ISO 16938-1.</li> <li>▪ 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.</li> </ul>
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## 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	

  

<b>Sag Flow</b>	0 mm (20 mm profile, +50 °C)	(EN ISO 7390)
<b>Product Temperature</b>	Maximum	+40 °C
	Minimum	+5 °C

<b>Ambient Air Temperature</b>	Maximum	+40 °C
	Minimum	0 °C
For applications at temperatures below +5 °C, please contact Sika Technical Services.		
<b>Substrate Temperature</b>	Maximum	+40 °C
	Minimum	0 °C
Note: The substrate temperature must be +3 °C above dew point temperature and free from frost and ice.		
<b>Backing Material</b>	Use closed cell, polyethylene foam backing rod	
<b>Curing Rate</b>	~3.5 mm/24 hours (+23 °C / 50 % r.h.)	
<b>Skin Time</b>	~50 minutes (+23 °C / 50 % r.h.)	
<b>Tooling Time</b>	~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 DOCUMENTS

- 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.

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

PVC substrates.

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

#### POROUS SUBSTRATES

Concrete, aerated concrete and cement based renders, mortars and bricks.

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

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 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.

- Prime surface using Sika® Primer-3 N 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

## CLEANING OF TOOLS

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 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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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### Product Data Sheet

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