

## 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

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
- Saw-cut joints

### 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
- High chemical and fuel 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

### 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

## 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>
<b>Chemical Base</b>	Sika® Purform® Polyurethane Technology
<b>Packaging</b>	600 ml cylindrical foil pack      20 foil packs per box Refer to the current price list for available packaging variations.
<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>	Black and Concrete Grey
<b>Density</b>	~1.30 kg/l <span style="float: right;">(ISO 1183-1)</span>

## 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>Movement Capability</b>	± 25 %		(EN ISO 9047)
	± 35 %		(EN 14188-2)
	± 50 %		(ASTM C719)
<b>Elastic Recovery</b>	~90 %		(EN ISO 7389)
<b>Tear Propagation Resistance</b>	~9.0 N/mm		(ISO 34-2)
<b>Service Temperature</b>	Maximum	+80°C	
	Minimum	-40°C	
<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)

## 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.

## 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.

## 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)

<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.)	

## 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 & 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

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

#### 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.

### Over-painting the sealant

Note: The Product can be over-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 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.

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