

# 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

**Sikaflex® PRO-3** is suitable for fire resistant joint sealing in horizontal and vertical building structure applications.

Use only in conjunction with **Sika® Backer Rod Fire**.

### CHARACTERISTICS / ADVANTAGES

- Movement capability 25 % (7,5 % in conjunction with Sika® Backer Rod Fire for fire resistant joint sealing)
- Elastic
- Good mechanical and chemical resistance
- High tear propagation resistance
- Bubble-free curing
- Good adhesion to defined construction materials
- Solvent-free
- Very low emissions

### SUSTAINABILITY

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

### APPROVALS / CERTIFICATES

- 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
- CE marking and Declaration to Performance to European Technical Assessment ETA 20/1111 based on EAD 350141-00-1106:2017 – Fire stopping and fire sealing products, linear joint and gap seal
- Cleanroom: CSM Biological Resistance, ISO 846, Fraunhofer, Certificate, No SI 1103-544
- Cleanroom: CSM Outgassing TVOC, CSM procedures, Fraunhofer, Certificate, No SI 1103-544
- ISO 11600 F-class 25 HM, SKZ, No 94931/11-II
- Migration behaviour EN 1186, EN 13130, CEN/TS 14234, ISEGA, Certificate No. 48644 U 18
- Sealants in waste water systems, DIBt Guidelines, SKZ, Report, No 94931/11-III
- EN 13501-1 Class E (Fire behaviour)



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## PRODUCT INFORMATION

<b>Composition</b>	Polyurethane i-Cure® Technology	
<b>Packaging</b>	300 ml (380 g) cartridge	12 cartridges per box
	600 ml (770 g) cylindrical foil pack	20 foil packs per box
<b>Colour</b>	Uni white, clear grey, medium grey, pebble grey, concrete grey, basalt grey, dark grey, anthracite grey, black	
<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>Density</b>	~1,35 kg/l	(ISO 1183-1)
<b>Product declaration</b>	EN 15651-4: PW EXT-INT CC 25 HM EN 14188-2 - Joint fillers and sealants - Cold applied joint sealants	

## TECHNICAL INFORMATION

<b>Shore A hardness</b>	~37 (after 28 days)	(ISO 868)
<b>Secant tensile modulus</b>	~0,60 N/mm <sup>2</sup> at 100 % elongation (+23 °C) ~1,10 N/mm <sup>2</sup> at 100 % elongation (-20 °C)	(ISO 8339)
<b>Elastic recovery</b>	> 80 % (after 28 days)	(ISO 7389)
<b>Tensile strain at break</b>	~600 %	(ISO 37)
<b>Tear propagation resistance</b>	~8,0 N/mm	(ISO 34)
<b>Movement capability</b>	25 % (7,5 % in conjunction with Sika® Backer Rod Fire for fire resistant joints)	
<b>Resistance to fire</b>	Class E	(DIN EN 13501-1)
<b>Chemical resistance</b>	Resistant to water, seawater, dilute alkalis, lime water, neutral water-dispersed detergents.  Not resistant to alcohol, organic acids, concentrated alkalis, concentrated acids, chlorinated and aromatic hydrocarbons.	
<b>Service temperature</b>	-40 °C to +70 °C	

**Joint design**

Joint layout and dimensions must be considered in the planning, because the installer usually has no possibility to change the joints. Calculation basis for the required joint width are the technical characteristics of the joint sealant and of the building materials, the stress of the building components, their construction and their size.

The joint width must be designed to suit the movement capability of the sealant. The joint width must be  $\geq 10$  mm and  $\leq 35$  mm. A width to depth ratio of 1:0,8 must be maintained (for exceptions, see table below).

Minimum joint width for movement joints: 10 mm  
Cut dummy joints with a width of less than 10 mm are predetermined breaking points and not movement joints.

**Typical joint widths for joints between concrete elements for interior applications (temperature difference 40°C)**

Joint distance [m]	Minimum joint width [mm]	Minimum joint depth [mm]
2	10	10
4	10	10
6	12	10
8	15	12
10	20	15

**Typical joint widths for joints between concrete elements for exterior applications (temperature difference 80°C)**

Joint distance [m]	Minimum joint width [mm]	Minimum joint depth [mm]
2	10	10
4	15	12
6	20	17
8	30	25
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 fire resistant joint sealing, a deviating planning of the joint regarding dimensions and configuration is required.** The correct joint dimensioning must be observed and is described in the approval (ETA 20/1111). For larger joints and fire resistant joints contact Sika Deutschland GmbH for additional information.

## APPLICATION INFORMATION

<b>Consumption</b>	<b>Joint length [m] per 600 ml sausage</b>	<b>Joint width [mm]</b>	<b>Joint depth [mm]</b>
	6	10	10
	3,2	15	12
	2,0	20	15
	1,2	25	20
	0,8	30	25
<b>Backing material</b>	Use closed cell, polyethylene foam backing rod.		
	For fire resistant joint sealing with <b>Sikaflex® PRO-3</b> , a deviating planning of the joint regarding dimensions and configuration is required. Use only in conjunction with <b>Sika® Backer Rod Fire</b> . The correct joint dimensioning must be observed and is described in the approval (ETA 20/1111). Contact Sika Deutschland GmbH for additional information.		
<b>Sag flow</b>	0 mm (20 mm profile, +50 °C)		(ISO 7390)
<b>Ambient air temperature</b>	+5 °C min./+40 °C max.		
<b>Substrate temperature</b>	+5 °C min./+40 °C max. Minimum +3 °C above dew point temperature		
<b>Substrate moisture content</b>	Dry		
<b>Curing rate</b>	~3,5 mm/24 hours (+23 °C / 50 % r.h.)		
<b>Skinning time</b>	~60 minutes (+23 °C / 50 % r.h.)		

## BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

## IMPORTANT CONSIDERATIONS

- Do not use to seal joints in and around swimming pools. Natural stone of granite is to pre-treat like concrete. Other natural stones must be tested individually to check if the stone experiences plasticiser migration. Please contact Sika Deutschland GmbH.
- Do not use **Sikaflex® PRO-3** as a glazing sealant.
- To be mechanically and chemically resistant, the sealant must be fully cured (min. 14 days at 20°C).
- 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.
- Elastic sealants should not generally be over painted. Sealant compatible coatings may cover the joint sides to max. 1 mm. Their compatibility must be tested individually according to DIN 52 452-2. Depending on type of paint used, plasticiser migration may occur causing the paint to become surface 'tacky'. Note: non-flexible paint systems may impair the elasticity of the sealant and lead to cracking of the paint coating.
- Do not use on PTFE (Teflon), Polyethylene (PE), Polypropylene (PP), Polystyrene (PS) and 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 mix with or expose uncured Sikaflex® PRO-3 to substances that may react with isocyanates, especially alcohols which are often components within e. g. thinners, solvents, cleaning agents and formwork releasing compounds. Such contact could interfere or prevent the cross linking curing reaction of the material.
- For fire resistant joint sealing, a deviating planning of the joint regarding dimensions and configuration is required. The correct joint dimensioning must be observed and is described in the approval (ETA 20/1111). Contact Sika Deutschland GmbH for additional information.

## 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

The substrate must be clean, dry, sound and free from oils, grease, dust, cement laitance, loose or friable

particles, paint, hydrophobizing and antigriffitti-coating.

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

Anodised aluminium, stainless steel, enamel or glazed tiles has to be cleaned and pre-treated using **Sika® Aktivator-205** applied with a clean, lint-free cloth. Before sealing, allow a waiting time of > 15 minutes (< 6 hours).

2-component coatings or paints, based on EP, UP or PU, epoxy-resin mortars and coatings, GRP based on EP, UP or PU, powder coated metals, bare aluminium, and galvanised steel has to be slightly roughend with a fine abrasive pad (e.g. siavlies very fine). Clean and pre-treat using **Sika® Aktivator-205** applied with a clean, lint-free 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, lint-free 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)

Unplasticised 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, bricks and weathered wood surfaces must be primed using **Sika® Primer-3 N** applied by brush. Before sealing, allow a waiting time of > 30 minutes (< 8 hours).

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 Deutschland GmbH for additional information.

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## 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, closed cell polyethylene foam 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, within the skinning time, 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 EQUIPMENT

Clean all tools and application equipment with **Sika® Remover-208** or **Sika® PowerClean** cleaning wipes, immediately after use. Hardened material can only be removed mechanically.

For cleaning skin use suitable cleaning wipes, e.g. **Sika® PowerClean** cleaning wipes, or other suitable skin cleaner and water.

Dont't use solvents at the skin!

## LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

## 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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