

PRODUCT DATA SHEET

Sikaflex® PRO-3 Purform® PowerCure

Accelerated polyurethane sealant for floor joints and civil engineering applications

DESCRIPTION

Sikaflex® PRO-3 Purform® PowerCure is a 1-part, accelerated, 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 very good mechanical and chemical resistance provides good durability.

USES

The Product is used for the following horizontal and vertical interior and exterior joint sealing applications:

- Warehouse and production floor areas
- Sewage treatment plants
- Tunnels
- Car park decks
- Trafficked areas
- Sea walls

FEATURES

- High movement capability: $\pm 25\%$ (ISO 9047)
- Fast development of mechanical properties
- Very good mechanical resistance
- Very good resistance to specific chemicals
- Very good resistance to weathering
- Good durability
- 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

CERTIFICATES AND TEST REPORTS

- CE marking and declaration of performance based on EN 15651-1:2012 Sealants for non-structural use in joints in buildings and pedestrian walkways — Part 1: Sealants for facade elements
- 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
- Testing of the booster accelerated joint sealant EN 15651-1, SKZ, No.220740/21-IV
- Testing of the booster accelerated joint sealant EN 15651-4, SKZ, No. 220740/21-V
- Testing of the booster accelerated sealant ISO 11600, SKZ, No.220740/21 -VI

PRODUCT INFORMATION

Product declaration	EN 15651-4:2012	PW EXT-INT CC 25 HM
Composition	Accelerated Sika® Purform® Polyurethane Technology	
Packaging	600 ml PowerCure Pack with booster 14 foil packs with booster per box	
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.
Refer to the current Safety Data Sheet for information on safe handling and storage.

Colour

Concrete grey

Density

1.30 kg/l

(ISO 1183-1)

SYSTEM INFORMATION**Compatibility**

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

TECHNICAL INFORMATION**Shore A hardness**

FINAL SHORE A HARDNESS

Tested after 28 days

40

(EN ISO 868)

80 % DEVELOPMENT OF SHORE A HARDNESS

80 % of final hardness**Time**

(EN ISO 868)

+5 °C 6 days

+10 °C 5 days

+23 °C 2 days

+40 °C 1 day

DEVELOPMENT OF SHORE A HARDNESS

Testing conditions +23 °C and 50 % rH.

Time	+5 °C	+23 °C	+35 °C
2 hours	<5	7	16
4 hours	5	15	23
8 hours	10	21	26
24 hours	26	28	32
7 days	32	31	37

(EN ISO 868)

2 hours <5 7 16

4 hours 5 15 23

8 hours 10 21 26

24 hours 26 28 32

7 days 32 31 37

Secant tensile modulus0.65 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)

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 Testing of the booster accelerated joint sealant EN 15651-4, SKZ, No. 220740/21-V test report for water and salt water. Contact Sika Technical Services for additional information.

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, Design guideline: 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	20 mm profile at +50 °C	0 mm	(EN ISO 7390)
Material temperature	Maximum	+40 °C	
	Minimum	+5 °C	
Ambient air temperature	Maximum	+40 °C	
	Minimum	0 °C	
Substrate temperature	Maximum	+40 °C	
	Minimum	0 °C	
	Beware of condensation. Substrate temperature during application must be at least +3 °C above dew point.		
Backing material	Use closed cell, polyethylene foam backing rod		

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

- Pretreatment Chart Constructive Sealants and Adhesives
- Facade Joint Sealing
- Design guideline: 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

Primers are adhesion promoters and not an alternative to improve poor preparation or 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 contaminants such as dirt, oil, grease, cement laitance, sealant residues and poorly bonded coatings which could affect adhesion of the primer and sealant. The substrate must be of sufficient strength to cope with the stresses induced by the sealant during movement.

1. Use techniques such as wire brushing, grinding, grit blasting or other suitable mechanical tools to remove all weak substrate material.
2. Repair all damaged joint edges with suitable Sika repair products.
3. Remove all dust, loose and friable material from all surfaces before application of the sealant.

If tested or supported by experience, the Product can be used without primers or activators on many substrates.

Carry out the following priming or pre-treatment procedures to ensure optimum adhesion and joint durability, or if you use the Product for high-performance applications such as joints on multi-storey buildings, highly stressed joints, or joints exposed to extreme weather.

NON-POROUS SUBSTRATES

Aluminium, anodised aluminium, stainless steel, galvanised steel or glazed tiles.

1. Lightly roughen the surface with a fine abrasive pad.
2. Clean and pre-treat using Sika® Aktivator-205 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.

Powder coated metals

1. Carry out preliminary trials to verify adhesion, contact Sika® Technical Services for further information.
- PVC substrates.

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

POROUS SUBSTRATES

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

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

Concrete that is 2–3 days old, or matt wet (surface dry) .

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

Reconstituted, cast stone or natural stone.

1. Carry out preliminary trials to check if the stone experiences plasticiser migration. For a suitable primer to prevent plasticiser migration, contact Sika® Technical Services for further information.

ASPHALT (ACCORDING 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 applied by brush.

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 accelerated by PowerCure®

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

Alcohol affecting the curing mechanism

Exposure to alcohol during curing may interfere with the curing reaction and cause the Product to be tacky.

- Do not expose the Product to alcohol containing products during the curing period
- 1. Apply masking tape where neat or exact joint lines are required.
- 2. After the required substrate preparation, insert a backing rod to the required depth.
- 3. Prime the joint surfaces as recommended in substrate preparation.
Note: Avoid excessive application of primer to avoid causing puddles at the base of the joint.
- 4. Set up the PowerCure Dispenser according to the PowerCure User Manual.
- 5. Cut the nozzle to the required bead size.
- 6. **IMPORTANT** Replace the mixer if the application is discontinued for more than 10 minutes (at +23 °C). Extrude the Product into the joint ensuring that it comes into full contact with the sides of the joint and avoiding any air entrapment.
Note: Temperature will affect Product reactivity and application properties.
- 7. **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.
- 8. Remove the tape within the skinning time of the Product after finishing.

OVER-PAINTING THE SEALANT

IMPORTANT

Tacky paint over the sealant

Some paint systems may exhibit plasticiser migration that will cause the painted surface to be tacky.

1. Consult the paint manufacturer for specific advice on over-painting sealants.
2. Trial the paint system with the Product prior to undertaking the project.

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IMPORTANT

Cracking paint over the sealant

Rigid paint systems reduce the elasticity of the Product and may crack when used on joints subject to movement.

- Do not use rigid paint systems to over-paint joints subject to movement.

The Product can be over-painted with most conventional paint coating systems. Prior to application test the paint system for compatibility.

1. Allow the Product to fully cure before over-painting.
2. Carry out preliminary trials to test the paint for compatibility in accordance with ISO/TR 20436:2017 - Buildings and civil engineering works — Sealants — Paintability and paint compatibility of sealants

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.

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

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.

Product Data Sheet

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October 2023, Version 01.01

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