

SikaSwell® 2010

Swellable joint sealing profile

Product Description

Sealing profile which swells in contact with water.

Uses

To seal:

- Construction joints
- Pipe and steel work penetrations through walls and floor slabs
- Construction joints in precast concrete
- Construction joints in tunnel segments
- Construction joints in cable ducts, etc.
- Around all types of penetrations through concrete

Characteristics / Advantages

- Easy to apply
- Can be applied on different substrates
- Covered with protective coating to avoid premature swelling
- Highly economical
- Swells in contact with water
- Water resistant
- No hardening time required
- No welding required
- Adaptable to fit many different detailing tasks
- Different types and dimensions available

Tests

Approval / Standards

STUVA: Water tightness test (October 99).

FH Aachen: Test of resistance to ageing (06.07.01).

PSB Corporation: Testing of hydrophilic sealing profiles (15.08.02).

Hygiene-Institut Gelsenkirchen: Scientific examination according to water-hygienic aspects (14.10.03).




Product Data

Form

Appearance / Colours Plain section swelling profiles
Highly swellable red profiles

Packaging Rolls packed in cardboard boxes, quantity depending on type of profile, consult the following table.

Types

Type	Width (mm)	Thickness (mm)	Cross section (schematically view)	Description
2010	20	10		Highly swellable profile

Storage

Storage Conditions / Shelf Life 48 months from date of production if stored in unopened, undamaged and sealed original packaging in dry conditions at temperatures between +5°C and +35°C. Protect from UV light.

System Information

System Structure SikaSwell® 2010
SikaSwell® S-2

Application Details

Substrate Quality The substrate must be sound, clean, dry, 'mat damp', free from all surface contaminants.

Substrate Preparation All loose particles, release agents, laitance, paint, rust and other poorly adhering materials must be removed by suitable hand or mechanical preparation.

Surfaces which are excessively rough tend to leak later on. We recommend smoothing of freshly placed concrete with a batten where the sealing profile is to be placed.

Technical Data

Chemical Base	Red part:	Combination of hydrophilic swelling resins and rubber
Change of Volume	Hydrophilic swelling red part:	
	7 days in tap water: ≥100% 14 days in tap water: ≥150%	(DIN 53521)
	10 dry-wet cycles in tap water: ≥100% (1 cycle = 7 days dry and 7 days in tap water)	(DIN 53521)
Swelling Pressure	≤ 15 bar after 7 days stored in tap water	

Mechanical / Physical Properties

Tensile Strength	<i>Hydrophilic swelling red part:</i> $\geq 2.5 \text{ N/mm}^2$		(DIN 53504)
Shore A Hardness	<i>Hydrophilic swelling red part:</i> 75 +/- 5		(DIN 53505)
Elongation at Break	<i>Hydrophilic swelling red part:</i> $\geq 250\%$		(DIN 53504)

Application Conditions / Limitations

Substrate Temperature	Dependent on the adhesive which has been selected. Please consult the corresponding product data sheet.		
Ambient Temperature	Dependent on the adhesive which has been selected. Please consult the corresponding product data sheet.		
Substrate Humidity	The substrate must be dry or "mat damp".		

Application Instructions

Application Method / Tools

Smooth, flat, dry substrates such as PVC, metals, precast concrete elements etc.:

Apply SikaSwell® S-2 in a continuous narrow bed (size of triangular section ~ 5 mm) to the substrate. The profile must be placed within max. 30 minutes onto and pressed well into the still fresh SikaSwell® S-2 sealant until small quantities of SikaSwell® S-2 extrude out from both side of the profiles.

Allow SikaSwell® S-2 to harden for 2-3 hours before placing concrete.

Consult the Product Data Sheet of SikaSwell® S-2.

Rough, uneven, dry or 'mat damp' substrates (e.g. scabbled concrete):

SikaSwell® S-2 must be extruded in sufficient quantity to level the roughness of the substrate.

Apply SikaSwell® S-2 in a continuous narrow bed (size of triangular section ~ 5 mm) to the substrate. The profile must be placed within max. 30 minutes onto and pressed well into the still fresh SikaSwell® S-2 sealant until small quantities of SikaSwell® S-2 extrude out from both side of the profiles.

Allow SikaSwell® S-2 to harden for 2-3 hours before placing concrete.

Consult the Product Data Sheet of SikaSwell® S-2.

General:

It is important that a full and continuous contact between the SikaSwell® 2010 and the substrate is achieved.

Place SikaSwell® 2010 in the centre of the concrete section.

Minimum cover to profiles on both sides must be 10 cm (reinforced concrete) or 15 cm (non reinforced concrete).

Connections and corners must be butt jointed and fixed.

During concreting, compact well around SikaSwell® 2010 to provide a dense concrete without and honeycombs or voids.

Cleaning of Tools

Clean all tools and application equipment with Thinner C immediately after SikaSwell® S-2 use. Hardened / cured material can only be mechanically removed.

Notes on Application / Limitations

SikaSwell® 2010 expands in contact with water. This does not happen immediately, but slowly after several hours. Nevertheless it is advisable not to leave SikaSwell® 2010 any length of time in the open air or exposed to rain water (max. 24 hours as long as water can drain away).

Do not use SikaSwell® 2010 for movement joints!

Do not use SikaSwell® 2010 in salty water.

If the water level suddenly increases the watertightness of joints will only be achieved when SikaSwell® 2010 have swollen.

In a totally dry state SikaSwell® 2010 shrink to their original dimensions, but expand again in contact with water.

Do not use SikaSwell® 2010 for sealing against water pressures higher than 2 bar because of the limited sealing distance.

If SikaSwell® 2010 are to be fixed around small diameter pipes use additional mechanical fixing with tie wire or a sleeve.

Notes

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.

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.

Health and Safety Information

Protective Measures

To avoid allergic reactions, we recommend the use of protective gloves. Change soiled work clothes and wash hands before breaks and after finishing work. Local regulations as well as health and safety advice on packaging labels must be observed.

Ecology

Refer to Material Safety Data Sheet.

Transportation Class

Refer to Material Safety Data Sheet.

Important Notes

Residues of material can be disposed of as household waste under agreement with the responsible local authorities.

Detailed health and safety information as well as detailed precautionary measures e.g. physical, toxicological and ecological data can be obtained from the material safety data sheet.

Toxicity

Refer to Material Safety Data Sheet.

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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