

# PRODUCT DATA SHEET

## SikaSwell® S-2

Polyurethane hydrophilic swellable sealant

### DESCRIPTION

SikaSwell® S-2 is a 1-part polyurethane hydrophilic sealant which swells in contact with water to seal all types of construction joints and penetrations in concrete.

### USES

Joint sealing:

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

Fixing / Adhering swellable profiles:

- SikaSwell® A Profiles
- SikaSwell® P Profiles

### CHARACTERISTICS / ADVANTAGES

- 1-part, easy and fast to apply
- Highly economical joint sealing solution compared to other systems
- Versatile solution for joints and details
- Optimised expansion rate, no damage to fresh concrete
- Permanently water resistant (wet & dry cycles)
- Good adhesion to various substrates

### APPROVALS / CERTIFICATES

- Water Pressure Resistance and Durability tests, SikaSwell® S-2, BBA, Test certificate No.13/4994
- Water Tightness SikaSwell® S-2, Vattenfall, Test report No. 1278-10
- Sealing test Building Rules List A, SikaSwell® S-2, WISSBAU, Test report No. 2017-313

### PRODUCT INFORMATION

<b>Composition</b>	1-part polyurethane, moisture curing	
<b>Packaging</b>	300 ml cartridges	12 cartridges / box
	600 ml unipacs	20 unipacs / box
	Please contact our customer service, for information of what packaging sizes are sold in Denmark.	
<b>Appearance / Colour</b>	Oxide red	
<b>Shelf life</b>	9 months from the 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>	1,24 kg/l (at +23 °C)	(ISO 2811)

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## TECHNICAL INFORMATION

Shore A hardness	Non-swollen (7 days / +23 °C / 50 % r.h.)	30–50	(ISO 7619-1)
Change of volume	1 day in tap water	< 25 %	(ISO 1817)
	7 days in tap water	< 100 %	

Swelling properties in salty water will be reduced and delayed.

## APPLICATION INFORMATION

Sag flow	< 2 mm (+23 °C / 50 % r.h.)		(ISO 7390)
Consumption	Size of triangular section	300 ml cartridges	600 ml unipacs
	12 mm	4,1 m	8,2 m
	15 mm	3,1 m	6,2 m
	20 mm	1,8 m	3,6 m
Consumption depends on the roughness and absorbency of the substrate. These figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level or wastage etc.			
Substrate moisture content	Dry or matt damp		
Curing rate	1 day (+23 °C / 50 % r.h.)	~2,0 mm	(CQP 049-2)
	10 days (+23 °C / 50 % r.h.)	~10,0 mm	
Skinning time	60 minutes (+23 °C / 50 % r.h.)		(EN 15651)
	Place SikaSwell® profiles onto SikaSwell® S-2 within a maximum of 30 minutes.		
Ambient air temperature	+5 °C min. / +35 °C max.		
Substrate temperature	+5 °C min. / +35 °C max.		

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY

The substrate must be sound, clean, dry or matt damp and free from all surface contaminants that could affect adhesion of the sealant.

### SUBSTRATE PREPARATION

#### Existing Concrete

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

#### Freshly cast concrete

Surfaces which are excessively rough can be susceptible to leaking. It is recommended to smoothen the freshly cast concrete with a batten where the sealant is to be placed.

### APPLICATION METHOD / TOOLS

#### SikaSwell® S-2 sealant with a SikaSwell® profile

Apply SikaSwell® S-2 in a narrow bed (size of triangular section ~12 mm) onto the prepared substrate. Extrude sufficient quantity to level the roughness of the substrate. Press the SikaSwell® A and P profiles firmly into

the fresh applied SikaSwell® S-2. The profiles must be placed within a maximum of 30 minutes. Allow SikaSwell® S-2 to harden minimum 24 hours before placing concrete. Before placing concrete, protect the SikaSwell® profiles against water (e.g. rain).

#### SikaSwell® S-2 sealant without a SikaSwell® profile

Apply SikaSwell® S-2 in a triangle bead onto the prepared substrate. Use a triangular nozzle or cut the nozzle to obtain a regular triangular extrusion section and apply SikaSwell® S-2 according to the following table. Allow SikaSwell® S-2 to harden for 1–2 days before placing concrete.

Structure thickness	Size of triangular section
< 20 cm	12 mm
20–30 cm	15 mm
30–50 cm	20 mm

Place SikaSwell® S-2 in the centre of the concrete structure, minimum cover 8 cm (reinforced concrete) or 15 cm (unreinforced concrete). Before placing concrete, protect the SikaSwell® S-2 against water (e.g. rain).

### CLEANING OF EQUIPMENT

Clean all tools and application equipment immediately after use with Sika® Colma-Cleaner. Hardened materi-

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al can only be removed mechanically.

## IMPORTANT CONSIDERATIONS

- Do not use SikaSwell® S-2 for movement joints.
- SikaSwell® S-2 must be placed in the centre of the concrete structure.
- Minimum cover to sealant on both sides must be 8 cm (reinforced concrete) or 15 cm (unreinforced concrete).
- Ensure a full and continuous contact between the SikaSwell® S-2 profiles and the substrate.
- For pouring height > 50 cm, SikaSwell® S-2 must harden for at least 3 days.
- Protect SikaSwell® S-2 from any water (e.g. rain, process and ponding water) before casting the concrete.
- SikaSwell® S-2 expands if it becomes in contact with water. This is not instantaneous and may take a few hours.
- In a totally dry state, SikaSwell® S-2 shrinks to its original dimensions then expands again in contact with water.
- SikaSwell® S-2 is recommended for sealing against water pressures up to 2 bar. For pressures higher than 2 bar, SikaSwell® S-2 can be used as a supplementary joint sealing solution.
- During concreting, compact well around the SikaSwell® S-2 to provide a dense concrete without any honeycombing or voids.

## 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.

## 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.

## 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.

## LEGAL NOTES

Any information or suggestions for use concerning Sika's products, which we either in writing or orally have given buyers or end-users of the product, have been given in good faith based on our own experiences and based on approved praxis and the technological and scientific knowledge on the time of giving such suggestions and information, which are given without any type of guarantees, and which do not lead to any further responsibility from Sika Danmark A/S, besides what is stated in the sales agreement in question. The buyer or end-user should themselves investigate or otherwise make sure, that our products are suitable for the use in question and further make sure that the products are kept and used correct and in agreement with the published rules and considering the actual conditions in order to avoid damages or less satisfactory results. Any order is accepted and any deliverance is affected according to the general terms of sales and delivery from Sika Danmark A/S, which are considered known and accepted, and which could be handed out when asked for. Our catalogues are not up-dated automatically. The present product data sheet is only for use in Denmark. Values stated in the present product data sheet should be seen as recommended, unless stated otherwise.

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