

PRODUCT DATA SHEET

SikaSwell® S-2

SWELLABLE SEALANT

DESCRIPTION

One part polyurethane sealant which swells in contact with water.

USES

To seal waterproof-structures and fix SikaSwell®-A and SikaSwell®-P Profiles or SikaFuko® Swell 1 Injection Hoses. 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.

Fixation:

- SikaFuko® Swell 1
- SikaSwell-A Profiles
- SikaSwell®-P Profiles

CHARACTERISTICS / ADVANTAGES

- Easy to apply
- Good adhesion to various substrates
- Optimised expansion rate, therefore no damage to fresh concrete during curing
- Highly economical
- Swells in contact with water
- Permanently water resistant
- Adaptable to fit many different detail tasks

PRODUCT INFORMATION

Chemical Base	1-part polyurethane, moisture curing	
Packaging	600 ml unipacs	(20 unipacs/box, 48 boxes/pallet)
	300 ml cartridges	(12 cartridges/box, 112 boxes/pallet)
Appearance / Colour	Oxide red	
Shelf Life	9 months shelf life from date of production if stored properly in undamaged, unopened, original sealed packaging.	
Storage Conditions	Dry storage at temperatures from +5 °C up to +25 °C. Protect from direct sunlight and humidity.	
Density	1.33 kg/L (at 23°C)	[ISO 2811]

TECHNICAL INFORMATION

Shore A Hardness	Swollen (7 days in tap water):	> 10
	Non-swollen (7 days: +23°C / 50% r.h.):	40-60
Change of Volume	1 day in tap water:	< 25 %
	7 days in tap water:	> 100 %

APPLICATION INFORMATION

Sag Flow	<2 mm	
Substrate Moisture Content	The substrate must be dry, max. Mat moist.	
Curing Rate	After 1 day:	~2.0 mm (+23°C / 50% r.h.)
	After 10 days:	~10.0 mm (+23°C / 50% r.h.)
Skin Time	2 hours (+23 °C / 50 % r.h.)	
Substrate Temperature	+5 °C min / +35 °C max.	
Ambient Temperature	+5 °C min / +35 °C max.	

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

The substrate must be sound, clean, dry max. mat moist 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 techniques.

APPLICATION METHOD / TOOLS

For the fixation of SikaSwell®-A and P Profiles and SikaFuko® Swell 1 Injection Hoses:

Apply SikaSwell® S-2 (through triangular nozzle of approx. 5 mm sections) to prepared substrate. In case of uneven substrates the extruded triangular section of SikaSwell® S-2 may need to be adjusted accordingly. SikaSwell®-A and P Profiles or SikaFuko® Swell 1 Injection Hoses must be pressed well into the fresh SikaSwell® S-2.

Allow SikaSwell® S-2 to harden for 2-3 hours before placing concrete.
Please consult the product data sheet of the mentioned products.

As buried sealant for construction joint:
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:

Structure Thickness	Size of triangular section	*Theoretical yield of 600 ml unipacs	*Theoretical yield of 300 ml unipacs
<30 cm	15 mm	6.2 m	3.1 m
30-50 cm	20 mm	3.6 m	1.8 m

*The actual yield can be lower than the theoretical yield depending on job-site conditions (substrate roughness, size of aggregates, etc.)

Place SikaSwell® S-2 in the centre of the concrete section.

Minimum cover to sealant on both sides must be 10 cm (reinforced concrete) or 15 cm (non reinforced concrete). For pouring heights < 50 cm allow sealant to harden for 2-3 hours. If the pouring height is > 50 cm, SikaSwell® S-2 must harden for at least 2 days.

During concreting, compact well around SikaSwell® S-2 to provide a dense concrete without any honeycombs or voids.

CLEANING OF TOOLS

Clean application tools immediately after use with Sika® Colma-Cleaner.

Hardened / cured material can only be removed mechanically.

LIMITATIONS

SikaSwell® S-2 expands in contact with water. This does not happen immediately, but slowly after a few hours. Nevertheless it is advisable not to leave SikaSwell® S-2 any length of time in standing water (max. 24 hours as long as the water can drain away). Do not use SikaSwell® S-2 for movement joints!

If the water level suddenly increases the watertightness of joints will be achieved when SikaSwell® S-2 has swollen.

In a totally dry state SikaSwell® S-2 shrinks to its original dimensions, but expands again in contact with water. Although SikaSwell® S-2 has been tested to water pressures up to 5 bar, it is not recommended for sealing against water pressures higher than 2 bar because of the limited sealing distance. For pressures > 2 bar SikaSwell® S-2 can be used to fix SikaFuko® Swell 1 Injection Hoses or as a supplementary sealing measure for Sika® Waterbars.

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 and recommended uses for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data and uses.

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

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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SikaSwell® S-2
December 2016
020703060010000002