

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

| | | |
|----------------------------|---|---------------------|
| Composition | 1-part polyurethane, moisture curing | |
| Packaging | 300 ml cartridges | 12 cartridges / box |
| | 600 ml unipacs | 20 unipacs / box |
| | Refer to current price list for packaging variations | |
| Appearance / Colour | Oxide red | |
| Shelf life | 9 months from the 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. | |
| Density | 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. | | |

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.

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.

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 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

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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.

| <u>Structure thickness</u> | <u>Size of triangular section</u> |
|----------------------------|-----------------------------------|
| < 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 material can only be removed mechanically.

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.

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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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