

PRODUCT DATA SHEET

Sikasil® WS-305 S

High performance silicone weatherproofing sealant

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Chemical base	1-component silicone
Color (CQP001-1)	Various colors available ^A
Cure mechanism	Moisture-curing
Cure type	Neutral
Density (uncured)	1.40 kg/l
Non-sag properties (CQP061-4 / ISO 7390)	Good
Application temperature	ambient 5 – 40 °C
Skin time (CQP019-1)	45 minutes ^B
Tack free time (CQP019-3)	140 minutes ^B
Curing speed (CQP049-1)	(see diagram)
Shore A hardness (CQP023-1 / ISO 48-4)	25 ^C
Tensile strength (CQP036-1 / ISO 527)	1.5 MPa
100 % modulus (CQP036-1 / ISO 527)	0.4 MPa
Elongation at break (CQP036-1 / ISO 527)	600 %
Tear propagation resistance (CQP045-1 / ISO 34)	8.0 N/mm
Service temperature	-40 – 150 °C
Shelf life (CQP016-1)	unipack 15 months ^D cartridge 9 months ^D

CQP = Corporate Quality Procedure

^C) after 28 days^A) defined by local color chart^D) stored below 25 °C^B) 23 °C / 50 % r. h.

DESCRIPTION

Sikasil® WS-305 S is a durable neutral-curing silicone sealant with a high movement capability and good adhesion to a wide range of substrates. It is particularly suited as a weather seal for structural glazing, curtain walling and windows.

PRODUCT BENEFITS

- Meets requirements of GB/T 14683 and ASTM C 920 for Type S, Grade NS, Class 50 (movement capability ± 50 %)
- Very good UV and weathering resistance
- Adheres well to many substrates including glass, metals, coated and painted metals, plastics and wood
- Conformity with LEED v4 EQc 2: Low-Emitting Materials

AREAS OF APPLICATION

Sikasil® WS-305 S can be used for weatherproofing sealing applications where durability under severe conditions is required.

It is particularly suited as a weather seal for structural glazing, curtain walling and windows.

This product is suitable for experienced professional users only. Tests with actual substrates and conditions have to be performed ensuring adhesion and material compatibility.

CURE MECHANISM

Sikasil® WS-305 S cures by reaction with atmospheric moisture. At low temperatures the water content of the air is generally lower and the curing reaction proceeds somewhat slower (see diagram 1).

The curing speed of the reaction depends mainly on the relative humidity and temperature. Material temperature above 50 °C could lead to bubble formation and has to be avoided.

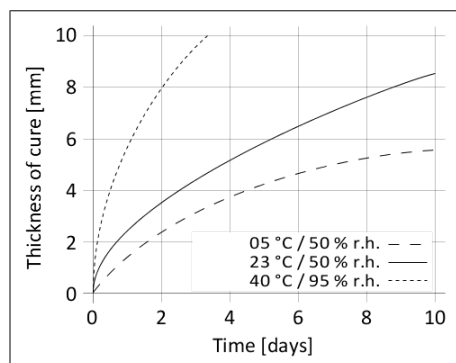


Diagram 1: Curing speed Sikasil® WS-305 S

METHOD OF APPLICATION

Surface preparation

Surfaces must be clean, dry and free from grease, oil and dust. Surface treatment depends on the specific nature of the substrates and is crucial for a long lasting bond.

Application

The optimum temperature for substrate and sealant is between 15 °C and 25 °C.

Sikasil® WS-305 S can be processed with manual, pneumatic or electric driven piston guns.

Joints must be properly dimensioned.

For optimum performance the joint width needs to be designed according to the movement capability of the sealant based on the actual expected movement. The minimum joint depth is 6 mm and a width / depth ratio of minimum 2 : 1 and maximum 4 : 1 must be respected.

Joints deeper than 15 mm must be avoided.

For backfilling, it is recommended to use closed cell, sealant compatible foam backer rods e.g. high resilience polyethylene foam rod. If joints are too shallow for backing material to be employed, we recommend using a polyethylene tape. This acts as a release film (bond breaker), allowing the joint to move and the silicone to stretch freely.

Tooling and finishing

Tooling and finishing must be carried out within the skin time of the sealant.

When tooling freshly applied Sikasil® WS-305 S press the sealant to the joint flanks to get a good wetting of the bonding surface. No tooling agents to be used.

Removal

Uncured Sikasil® WS-305 S can be removed from tools and equipment with Sika® Remover-208 or other suitable solvents. Once cured, the material can only be removed mechanically.

Hands and exposed skin have to be washed immediately using hand wipes such as Sika® Cleaner-350H or a suitable industrial hand cleaner and water.

Do not use solvents on skin.

Overpainting

Sikasil® WS-305 S cannot be overpainted.

Application limits

Most Sikasil® WS, SG, IG and WT, silicones manufactured by Sika are compatible with each other.

For specific information regarding compatibility between various Sikasil® products contact the Technical Department of Sika Industry.

To exclude materials influencing Sikasil® WS-305 S, all materials such as gaskets, tapes, setting blocks, sealants, etc., in direct and indirect contact have to be approved by Sika in advance.

Where two or more different reactive sealants are used, allow the first to cure completely before applying the next. Sikasil® WS-305 S may only be used in combination with structural glazing applications after a detailed examination of the corresponding project details.

Do not use Sikasil® WS-305 S on PMMA and PC elements as it may cause environmental stress cracking (crazing).

FURTHER INFORMATION

The information herein is offered for general guidance only. Advice on specific applications is available on request from the Technical Department of Sika Industry.

Copies of the following publications are available on request:

- Safety Data Sheets
- General Guidelines
- Sikasil® Weather Sealants

PACKAGING INFORMATION

Unipack	600 ml
Cartridge	300 ml

BASIS OF PRODUCT DATA

All technical data stated in this document are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

HEALTH AND SAFETY INFORMATION

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.

DISCLAIMER

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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