

Sikasil® WS-305 CN

Weatherproofing sealant

Technical Product Data

Chemical base	1-C silicone
Color (CQP ¹ 001-1)	See product overview
Cure mechanism	Moisture-curing
Cure type	Neutral
Density (uncured) (CQP 006-4)	transparent and aluminum all other colors
	1.03 kg/l approx. 1.49 kg/l approx.
Non-sag properties (CQP 061-4 / ISO 7390)	1 mm approx.
Application temperature	5 - 40°C (40 - 105°F)
Skin time ² (CQP 019-2)	transparent and aluminum all other colors
	40 min. approx. 15 min. approx.
Tack-free time ² (CQP 019-1)	180 min approx.
Curing speed (CQP 049-1)	See diagram 1
Shore A-hardness ³ (CQP 023-1 / ISO 868)	25 approx.
Tensile strength (CQP 036-1 / ISO 37)	1.0 N/mm ² approx.
Elongation at break (CQP 036-1 / ISO 37)	900% approx.
Tear propagation resistance (CQP 045-1 / ISO 34)	4.0 N/mm approx.
100% modulus (CQP 036-1 / ISO 37)	0.4 N/mm ² approx.
Movement accommodation capability (ASTM C 719 ⁴)	± 50%
Thermal resistance (CQP 513-1)	4 hours 1 hour
short term	200°C (392°F) approx. 220°C (428°F) approx.
Service temperature	-40 - 150°C approx. (-40 - 302°F)
Shelf life (storage below 25°C) (CQP 016-1)	12 months

¹⁾ CQP = Corporate Quality Procedure ²⁾ 23°C (73°F) / 50% r.h. ³⁾ after 28 days curing ⁴⁾ Approved by a third party institute

Description

Sikasil® WS-305 CN is a neutral-curing silicone sealant with a high movement capability and excellent adhesion to a wide range of substrates.
Sikasil® WS-305 CN is manufactured in accordance with ISO 9001 quality assurance system and the responsible care program.

Product Benefits

- Meets requirements of ASTM C 920 (class 50), TT-S00230C, TT-S001543A
- Outstanding UV and weathering resistance
- Adheres well to many substrates including glass, metals, coated and painted metals, plastics and wood

Areas of Application

Sikasil® WS-305 CN can be used for weatherproofing and sealing applications where durability under severe conditions is required. Sikasil® WS-305 CN is particularly suited as a weather seal for curtain walling and windows. This product is suitable for professional experienced users only. Tests with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.



Cure Mechanism

Sikasil® WS-305 CN cures by reaction with atmospheric moisture. The reaction thus starts at the surface and proceeds to the core of the joint. The curing speed depends on the relative humidity and the temperature (see diagram 1 below). Heating above 50°C to speed-up the vulcanization is not advisable as it may lead to bubble formation. At low temperatures the water content of the air is lower and the curing reaction proceeds more slowly.

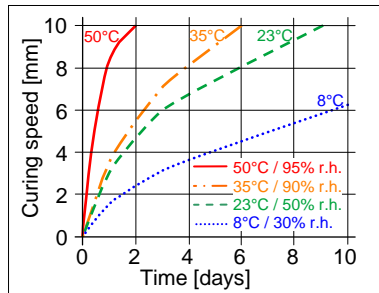


Diagram 1: Curing speed 1C-Sikasil®

Application Limits

Most Sikasil® WS, FS, SG, IG, WT, AS and other engineering silicone sealants manufactured by Sika are compatible with each other and with SikaGlaze® IG sealants. For specific information regarding compatibility between various Sikasil® and SikaGlaze® products contact the Technical Department of Sika Industry. All other sealants have to be approved by Sika before using them in combination with Sikasil® WS-305 CN. Where two or more different reactive sealants are used, allow the first to cure completely before applying the next.

Do not use Sikasil® WS-305 CN on pre-stressed polyacrylate and polycarbonate elements as it may cause environmental stress cracking (crazing).

The compatibility of gaskets, backer rods and other accessory materials with Sikasil® WS-305 CN must be tested in advance.

Joints deeper than 15 mm should be avoided.

The above information is offered for general guidance only. Advice on specific applications will be given on request.

Method of Application

Surface preparation

Surfaces must be clean, dry and free from oil, grease and dust.

Advice on specific applications and surface pretreatment methods is available from the Technical Department of Sika Industry.

Application

After suitable joint and substrate preparation, Sikasil® WS-305 CN is gunned into place. Joints must be properly dimensioned as changes are no longer possible after construction. For optimum performance the joint width should 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 2:1 must be respected. 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.

For more information contact the Technical Department of Sika Industry.

Tooling and finishing

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

When tooling freshly applied Sikasil® WS-305 CN press the adhesive to the joint flanks to get a good wetting of the bonding surface.

Removal

Uncured Sikasil® WS-305 CN may be removed from tools and equipment with Sika® Remover-208 or another suitable solvent. Once cured, the material can only be removed mechanically. Hands and exposed skin should be washed immediately using Sika® Handclean towels or a suitable industrial hand cleaner and water. Do not use solvents!

Overpainting

Sikasil® WS-305 CN cannot be overpainted.

Further Information

Copies of the following publications are available on request:

- Safety Data Sheet
- General Guidelines: Solutions for Facades - Application of Sikasil® Weather Sealants

Packaging Information

Cartridge	300 ml
Unipack	400 ml
Unipack	600 ml

Value Bases

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.

Health and Safety Information

For information and advice regarding transportation, handling, storage and disposal of chemical products, users shall refer to the actual Safety Data Sheets 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.

Further information available at:

www.sika.ch
www.sika.com

Sika Schweiz AG
Business Unit Industry
Tüffenwies 16
CH-8048 Zurich
Switzerland
Tel. +41 58 436 40 40
Fax +41 58 436 55 30

