

Sikasil® WS-305

Weatherproofing sealant

Technical Product Data:

Chemical base	1-C silicone
Colour (CQP ¹ 001-1)	See product overview
Cure mechanism	Moisture-curing
Cure Type	Neutral
Density (uncured) (CQP 006-4)	Transparent, aluminium all other colours
	1.03 kg/l approx. 1.49 kg/l approx.
Non-sag properties (CQP 061-4 / ISO 7390)	< 2 mm approx
Application temperature	5 - 40°C
Skin time ² (CQP 019-2)	20 min. approx
Tack-free time ² (CQP 019-1)	180 min. approx
Curing speed (CQP 049-1)	See diagram 1
Shore A hardness (CQP 023-1 / ISO 868)	20 approx.
Tensile strength (CQP 036-1 / ISO 37)	0.9 N/mm ² approx.
Elongation at break (CQP 036-1 / ISO 37)	700% approx.
Tear propagation resistance (CQP 045-1 / ISO 34)	4 N/mm approx.
100% modulus (CQP 036-1 / ISO 37)	0.4 N/mm ² approx
Movement accommodation capability (ASTM C 719)	±50%
Thermal resistance (CQP 513-1)	Long term Short term
	4 hour 1 hour
	180°C approx. 200°C approx. 220°C approx.
Service temperature	-40°C to +150°C
Shelf life (stored below 25°C) (CQP 016-1)	12 months

¹) CQP – Corporate Quality Procedure ²) 23°C / 50% relative humidity

Description:

Sikasil WS-305 is a neutral curing silicone sealant with high movement capability and excellent adhesion to a wide range of substrates

Sikasil WS-305 is manufactured in accordance with ISO 9001 quality assurance system and the responsible care program.

Product benefits:

- Meets requirements of ISO 11600 25 LM F & G, 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 can be used for weatherproofing and sealing applications where durability under severe conditions is required.

Sikasil WS-305 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 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 vulcanisation 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.

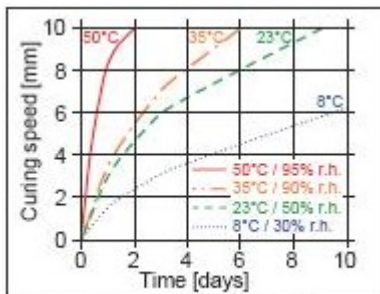


Diagram 1: Curing speed 1C-Sikasil®

Application Limits:

All Sikasil WS, FS, SG, IG, WT and other engineering silicone sealants and adhesives are compatible with each other. Sikasil WS and FS sealants are compatible with SikaGlaze IG sealants. All other sealants have to be approved by Sika before using them in combination with Sikasil WS-305. 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 on pre-stressed polyacrylate and polycarbonate elements as it may cause environmental stress cracking (crazing).

The compability of gaskets, backer rods and other accessory materials with Sikasil WS-305 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 pre-treatment methods is available from the Technical Service Department.

Application.

After suitable joint and substrate preparation, Sikasil WS-305 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 please contact our Technical Department.

Tooling and finishing.

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

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

Removal.

Uncured Sikasil WS-305 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 Towel or a suitable industrial hand cleanser and water. Do not use solvents.

Overpainting.

Sikasil WS-305 cannot be overpainted.

Further information:

Copies of the following publications are available on request:

- Material Safety Data Sheet

Packaging information:

Cartridge	300 ml
Sausage	600 ml

Value Bases:

All technical data stated in this Technical 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 should refer to the actual Material Safety Data Sheets containing physical, ecological, toxicological and other safety related data.

Note:

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 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 proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users should always refer to the most recent issue of the Australian version of the Technical Data Sheet for the product concerned, copies of which will be supplied on request.

