BUILDING TRUST

PRODUCT DATA SHEET

Sikasil® WS-305K

HIGH PERFORMANCE WETHERPROOFING SEALANT

DESCRIPTION

Sikasil® WS-305K is a neutral curing silicone sealant with a high movement capability and excellent adhesion to a wide range of substrates.
Sikasil® WS-305K is manufactured in accordance with ISO 9001/14001 quality assurance system and the responsible care program.

USES

Sikasil® WS-305K can be used for weatherproofing and sealing applications where durability under severe conditions is required. Sikasil® WS-305K is particularly suited as a weather seal for curtain walling and windows.

CHARACTERISTICS / ADVANTAGES

- Outstanding UV and weathering resistance
- Adheres well to glass, metals, coated painted metals, PVC, plastics and wood
- Good workability
- Low emissions

SUSTAINABILITY

Meet requirement of Korea Eco-label Standards: EL259

APPROVALS / CERTIFICATES

KS F 4910 F-25LM(similiar to ISO 11600 F-25LM): Sealants for sealing and glazing in buildings
ASTM C 920 for Type S, Grade NS, Class 50

PRODUCT INFORMATION

Composition	Neutral cure silicone
Packaging	300ml cartridge: 25 cartridges per box 500ml unipack: 20 unipacks per box
Colour	Black, Grey S1, White * Special color is available on request.
Shelf life	12 months from the date of production
Storage conditions	The product must be stored in original, unopened and undamaged sealed packing in dry conditions at temeratures between +5°C and +25°C. Always refer to packaging.
Density	~ 1,40 kg/l

TECHNICAL INFORMATION

Shore A Hardness	~ 30 (after 28 days)	
Secant Tensile Modulus	~ 0,40 N/mm² at 100% elongation (23°C) ~ 0,50 N/mm² at 100% elongation (-20°C)	(ISO 8339) (ISO 8339)
Elongation at Break	~ 650%	(ISO 37)

Movement Capability	±25% ±50%	(ISO 11600) (ASTM C 719)
Service Temperature	-40ºC min. / +150ºC max.	
Joint Design	The joint width must be designed to suit the movement capability of the sealant. The joint width must be ≥ 6 mm and ≤ 45 mm. The joint depth must be ≥ 6 mm and ≤ 15 mm. A width to depth ratio of 2:1 must be maintained (for exceptions, see table below).	

Typical joint dimensions

Joint Width [mm]	Joint Depth [mm]
6	6
10	6
15	8
20	10
30	15
45	15

All joints must be correctly designed and dimensioned in accordance with the relevant standards and codes of practice before their construction. The basis for calculation of the necessary joint widths are the type of structure, dimensions, technical values of the adjacent building materials, joint sealing material, and the specific exposure of the building and the joints. For larger joints contact Sika Technical Services for additional information.

Compatibility	Sikasil® WS-305K is compatible with most Sikasil® silicone weather sealants, Sikasil® SG adhesives and Sikasil® IG sealants. All other sealants and adhesives have to be approved by Sika before using them in direct contact with Sikasil® WS-305K. Where two or more different reactive sealants and/or adhesives are used, allow the first one to cure completely before applying the next one. For specific information regarding compatibility contact Sika Technical Services.	

APPLICATION INFORMATION

Backing Material	Use closed cell, polyethylene foam backing rod or bond breaker	
Sag Flow	~ 2 mm (20mm profile, 50ºC)	
Ambient Air Temperature	+5ºC min. / +40ºC max.	
Substrate Temperature	+5ºC min. / +40ºC max. (3ºC above dew point temperature)	
Curing Rate	~ 3mm / 24 hours (23ºC / 50% r.h.)	(CQP 049-2)
Skinning time	~ 15 min	(CQP 019-1)
Tack free time	~ 60 min (23ºC / 50 % r.h.)	(CQP 019-1)

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

The substrate must be clean, dry, sound and homogeneous, free from oils, grease, dust and loose or friable particles. For optimum adhesion and joint durability, the following substrate priming (and/or pre-treatment) procedures must be followed:

Non-porous substrates
Float glass, coated glass, anodised aluminium and stainless steel must be pre-treated using Sika® Aktivator-205, Sika® Aktivator-100 or Sika® Cleaner P. Powder coated and PVDF coated metals must be pre-treated using Sika® Aktivator-205. For more details such as application and flash-off times, refer to the most recent Product Data Sheet of the respective pre-treatment product.

Porous substrates
Concrete, aerated concrete and cement based renders, mortars and bricks must be primed using Sika® Primer-3 N or Sika® Primer-210. For more details such as application and flash-off times, refer to the most recent Product Data Sheet of the respective pre-treatment product.
Adhesion tests on project specific substrates must be performed and procedures agreed with all parties before full project application. For more detailed advice and instructions contact Sika Technical Services.
Note: Primers and activators are adhesion promoters and not an alternative to improve poor preparation / cleaning of the joint surface. Primers also improve the long term adhesion performance of the sealed joint.

APPLICATION METHOD / TOOLS

Masking
It is recommended to use masking tape where neat or exact joint lines are required. Remove the tape within the skin time after finishing.

Joint Backing
After the required substrate preparation, insert a suitable backing rod to the required depth.

Priming
Prime the joint surfaces as recommended in substrate preparation. Avoid excessive application of primer to avoid causing puddles at the base of the joint.

Application
Sikasil® WS-305K is supplied ready to use.
Prepare the end of the foil pack or cartridge, insert into the sealant gun and fit the nozzle. Extrude Sikasil® WS-305K into the joint ensuring that it comes into full contact with the sides of the joint and avoiding any air entrapment.

Finishing
As soon as possible after application, sealant must be firmly tooled against the joint sides to ensure adequate adhesion and a smooth finish.
Use a compatible tooling agent (e.g. Sika® Tooling Agent N) to smooth the joint surface. Do not use tooling products containing solvents.

CLEANING OF EQUIPMENT

Clean all tools and application equipment immediately after use with Sika® Remover-208. Once cured, hardened material can only be removed mechanically. For cleaning skin use Sika® Cleaning Wipes-100.

FURTHER INFORMATION

Copies of the following publications are available on request:
- Safety Data Sheet
- General Guidelines: Solutions for Facades - Application of Sikasil® Weather Sealants

IMPORTANT CONSIDERATIONS

- Sikasil® WS-305K cannot be overpainted.
- Protect the sealant after application for at least 24 hours.
- Colour variations may occur due to exposure to chemicals or other extreme external influences. This effect is aesthetic nature and does not adversely influence the technical performance or durability of the product.
- Do not use on natural stone.
- Do not use on bituminous substrates, natural rubber or any building materials which might bleed oils, plasticisers or solvents that could degrade the sealant. EPDM or other gaskets in direct contact with Sikasil® WS-305K have to be tested for compatibility prior to application. For specific advice contact Sika Technical Services.
- Do not use on pre-stressed polyacrylate and polycarbonate as it may cause environmental stress cracking (crazing).
- Do not use to seal joints in and around swimming pools.
- Do not use for joints under water pressure or permanent water immersion.
- For specific information regarding compatibility between various Sikasil® products contact the Technical Department of Sika. To exclude materials influencing Sikasil® WS-305K, all materials such as gaskets, tapes, setting blocks, sealants, etc., in direct and indirect contact have to be approved by Sika in advance.
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- Where two or more different reactive sealants are used, allow the first to cure completely before applying the next.
- Sikasil® WS-305K may only be used in combination with structural glazing applications after a detailed examination of the corresponding project details.

BASIS OF PRODUCT DATA

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

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. 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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