

PRODUCT DATA SHEET

Sikasil® SG-500 S

HIGH-PERFORMANCE, 2-COMPONENT SILICONE STRUCTURAL GLAZING ADHESIVE

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Properties	Sikasil® SG-500 S (A)	Sikasil® SG-500 S (B)
Chemical base	2-component silicone	
Color (CQP001-1)	White	Black
	mixed	Black
Cure mechanism	Polycondensation	
Cure type	Neutral	
Density (uncured)	1.37 kg/l	1.01 kg/l
	mixed	1.34 kg/l
Mixing ratio	A : B by volume	10 : 1
	A : B by weight	13 : 1
Viscosity (CQP029-6)	180 Pa·s	150 Pa·s
Consistency	Paste	
Application temperature	ambient	5 – 40 °C
Snap time (CQP554-1)	45 minutes ^A	
Tack free time (CQP019-3)	100 minutes ^A	
Shore A hardness (CQP023-1 / ISO 48-4)	35	
Tensile strength (CQP036-1 / ISO 527)	1.9 MPa	
100 % modulus (CQP036-1 / ISO 527)	0.9 MPa	
Elongation at break (CQP036-1 / ISO 527)	300 %	
Tear propagation resistance (CQP045-1 / ISO 34)	2.5 N/mm	
Service temperature (CQP513-1)	-40 – 150 °C	
Shelf life	15 months ^B	12 months ^B

CQP = Corporate Quality Procedure

^{A)} 23 °C / 50 % r. h.^{B)} storage below 25 °C

DESCRIPTION

Sikasil® SG-500 S is a 2-component, high modulus, neutral curing structural silicone adhesive. This product is designed to be used in structural glazing applications.

PRODUCT BENEFITS

- Meets requirements of GB 16776, ASTM C 1184 and ASTM C 920 (class 25, movement capability ± 25 %)
- Design tensile strength for dynamic loads: $\sigma_{des} = 0.14$ MPa or 20 psi (ASTM)
- Adheres well to a wide range of substrates
- Very good UV and weathering resistance
- Good long term durability
- Complies with common VOC requirements: Global LEED v4/v4.1 beta EQc 2: Low-Emitting Materials: CDPH-IAQ SCAQMD Rule1168

AREAS OF APPLICATION

Sikasil® SG-500 S is used for structural glazing and similar high-demanding industrial applications.

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

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CURE MECHANISM

Sikasil® SG-500 S starts to cure immediately after mixing the two components.

The speed of the reaction depends mainly on the temperature, i.e. the higher the temperature the faster the curing process. Heating above 50 °C could lead to bubble formation and is therefore not allowed.

The mixer open time, i. e. the time the material can remain in the mixer without flushing or extrusion of product, is significantly shorter than the snap time indicated above.

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.

Prior to processing, the components and packaging must be visually checked. If separation of Sikasil® SG-500 S B-component is observed, the material requires a homogeneous and bubble free remixing or stirring before further use.

When processing Sikasil® SG-500 S, both components have to be mixed homogeneously and air-bubble-free in the correct ratio as indicated with an accuracy of ± 10 %. Most commercially available metering and mixing equipment are suitable. For advice on selecting and setting up a suitable pump system, contact the System Engineering Department of Sika Industry.

Consider that the B-component is moisture sensitive and must therefore only be exposed briefly to air.

Joints must be properly dimensioned.

Basis for calculation of the necessary joint dimensions are the technical values of the adhesive and the adjacent building materials, the exposure of the building elements, their construction and size as well as external loads.

Tooling and finishing

Tooling and finishing must be carried out within the snap time of the adhesive. When tooling freshly applied Sikasil® SG-500 S, press the adhesive to the joint flanks to get a good wetting of the bonding surface. No tooling agents to be used.

Removal

Uncured Sikasil® SG-500 S may be removed from tools and equipment with Sika® Remover-208 or other suitable solvents. Once cured, the material can only be removed mechanically.

Re-usable, usually metallic, static mixer can be cleaned with Sika® Mixer Cleaner.

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

Do not use solvents on skin.

Overpainting

Sikasil® SG-500 S cannot be overpainted.

Application limits

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

To exclude materials influencing Sikasil® SG-500 S, all materials such as gaskets, 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 one.

The above mentioned Sika process materials may only be used in structural glazing or window bonding applications after a detailed examination and written approval of the corresponding project details by Sika Industry.

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 Structural Silicone Glazing with Sikasil® SG adhesives

PACKAGING INFORMATION

Sikasil® SG-500 S (A)

Drum	260 kg
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Sikasil® SG-500 S (B)

Pail	20 kg
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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 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.

DISCLAIMER

The information, and, in particular, the recommendations relating to the application and enduse 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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