



Sikasil[®] SG-500

High performance structural silicone adhesive

Technical Product Data

Properties	Component A Sikasil [®] SG-500 A	Component B Sikasil [®] SG-500 B
Chemical base	2-C silicone	
Colour (CQP ¹ 001-1)	White	Black
Colour mixed	Black	
Cure mechanism	Polycondensation	
Cure type	Neutral	
Density (CQP 006-4)	1.4 kg/l approx.	1.1 kg/l approx.
Density mixed	1.37 kg/l approx.	
Mixing ratio	A:B by volume A:B by weight	10:1 13:1
Viscosity (CQP 029-5)	1'100 Pa·s approx.	300 Pa·s approx.
Consistency	Paste	
Application temperature	5 - 40°C	
Snap time ² (CQP 554-1)	50 min approx.	
Tack-free time ² (CQP 019-1)	240 min approx.	
Shore A-hardness (CQP 023-1 / ISO 868)	45 approx.	
Tensile strength (CQP 036-1 / ISO 37)	2.2 N/mm ² approx.	
Elongation at break (CQP 036-1 / ISO 37)	300% approx.	
Tear propagation resistance (CQP 045-1 / ISO 34)	6.0 N/mm approx.	
100% modulus (CQP 036-1 / ISO 37)	1.1 N/mm ² approx.	
12.5% modulus (CQP 036-1 / ISO 37)	0.3 N/mm ² approx.	
Movement accommodation capability (ASTM C 719)	±12.5%	
Water vapour permeability (EN 1279-4)	19 g H ₂ O / m ² ·24 h·2 mm approx.	
Thermal resistance (CQP 513-1)	180°C approx.	
Short term	4 hours 1 hour	200°C approx. 220°C approx.
Service temperature	-40 - 150°C approx.	
Shelf life (storage below 25°C) (CQP 016-1)	15 months	12 months

¹CQP = Corporate Quality Procedure

²23°C (73°F) / 50% r.h.

Description

Sikasil[®] SG-500 is a two-part, high-modulus, neutral-curing structural silicone adhesive.

Sikasil[®] SG-500 is manufactured in accordance with ISO 9001 quality assurance system and the responsible care program.

Product Benefits

- Meets requirements of EOTA ETAG 002, EN 13022 and ASTM C 1184
- CE-marked, European Technical Approval (ETA)
- SNJF-VEC and VI-VEC recognized
- Fire rated (EN 11925-2 / DIN 4102-B1)
- Resistant to UV and weathering

Areas of Application

Sikasil[®] SG-500 is ideal for structural glazing, bonding of solar modules and other high-demanding industrial applications. 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.

Industry



Cure Mechanism

Sikasil® SG-500 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 is not advisable as it may lead to bubble formation.

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. For more information please contact the Technical Service Department of Sika Industry.

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 please contact the Technical Service Department of Sika Industry. All other sealants have to be approved by Sika before using them in combination with Sikasil® SG-500. Where two or more different reactive sealants are used, allow the first to cure completely before applying the next.

Sikasil® SG, IG and WT sealants and adhesives may only be used in structural glazing or window bonding applications by experienced professionals and after a detailed examination and written approval of the corresponding project details by the Technical Service Department of Sika Industry.

The compatibility of gaskets, backer rods, setting blocks and other accessory materials with Sikasil® SG-500 must be tested in advance.

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 of Sika Industry.

Application

Before processing Sikasil® SG-500 both components have to be mixed homogeneously and air-bubble-free in the correct ratio as indicated with an accuracy of $\pm 10\%$. Most commercially available metering and mixing equipments are suitable. Please contact the System Engineering of Sika Industry for specific advice.

While the A-part of Sikasil® SG-500 is stable in air, the B-part is moisture-sensitive and must only be exposed briefly to air.

Joints must be properly dimensioned as changes are no longer possible after construction. 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. For more information please contact the Technical Service Department of Sika Industry.

Tooling and finishing

Tooling and finishing must be carried out within the snap time of the adhesive. No tooling agents must be used.

Removal

Uncured Sikasil® SG-500 may be removed from tools and equipment with Sika® Remover-208 or another suitable solvent. Hands and exposed skin should be washed immediately using Sika® Handclean Towel or a suitable industrial hand cleaner and water. Do not use solvents!

Overpainting

Sikasil® SG-500 is an elastic adhesive and cannot be overpainted.

Further Information

Copies of the following publications are available on request:

- Material Safety Data Sheets
- General Guidelines "Structural Silicone Glazing with Sikasil® Adhesives"

Packaging Information

Dual cartridge	490ml
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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 Material 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.

