

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	1.37kg/l approx.	
Mixing ratio	A:B by volume	10:1
	A:B by weight	13:1
Viscosity (CQP 029-5)	1'100 Pa's approx	150 Pa's approx.
Consistency	Paste	
Application temperature	5 - 40°C	
Snap time ² (CQP 536-3)	60 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 N/mm approx.	
100% modulus (CQP 036-1 / ISO 37)	1.1 N/mm ² approx	
12.5% modulus ³ (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)	Long term	180°C approx.
	Short term	4 hour
		1 hour
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 ³ For further values: see Calculation Value Sheet

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 recognised
- 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.

Cure Mechanism:

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

The speed of 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 further information contact our Technical Department.

Application Limits:

All Sikasil WS, FS, SG, IG, WT and other engineering silicone sealants and adhesives are compatible with each other. Sikasil SG, IG and WT sealants are compatible with SikaGlaze IG sealants. All other sealants have to be approved by Sika before using them in combination with Sikasil IG-25. 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. 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.

Application.

Before processing of 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 our Technical Department for specific advice.

While the Part A of Sikasil SG-500 is stable in the air, the Part B 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 contact our Technical Department.

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. The static mixer of the metering and mixing equipment can be cleaned with Sikasil Mixer Cleaner. 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 SG-500 is an elastic adhesive and cannot be overpainted.

Further information:

Copies of the following publications are available on request:

- Material Safety Data Sheet
- Different "Application Guidelines"
- Calculation value sheet

Packaging information:

Drum (Comp A)	260 kg
Pail (Comp B)	20 kg

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.



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