

## PRODUCT DATA SHEET

# Sikasil® SG-500 CN

## 2-COMPONENT SILICONE STRUCTURAL GLAZING ADHESIVE, COMPLYING ASTM AND GB STANDARDS

### TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

| Properties   | Sikasil® SG-500 CN (A)   | Sikasil® SG-500 CN (B) |
|--|--------------------------|------------------------|
| <b>Chemical base</b>                                   | 2-component silicone     |                        |
| <b>Color (CQP001-1)</b>                                | White                    | Black                  |
|  | Black                    |                        |
| <b>Cure mechanism</b>                                  | Polycondensation         |                        |
| <b>Cure type</b>                                       | Neutral                  |                        |
| <b>Density</b>   | 1.4 kg/l                 | 1.1 kg/l               |
|  | mixed 1.4 kg/l           |                        |
| <b>Mixing ratio</b>                                    | A:B by volume            | 10 : 1                 |
|  | A:B by weight            | 13 : 1                 |
| <b>Viscosity (CQP029-6)</b>                            | 1 200 Pa·s               | 300 Pa·s               |
| <b>Consistency</b>                                     | Paste                    |                        |
| <b>Application temperature</b>                         | ambient 5 – 40 °C        |                        |
| <b>Snap time (CQP554-1)</b>                            | 60 minutes <sup>A</sup>  |                        |
| <b>Tack free time (CQP019-3)</b>                       | 270 minutes <sup>A</sup> |                        |
| <b>Shore A hardness (CQP023-1 / ISO 7619-1)</b>        | 40                       |                        |
| <b>Tensile strength (CQP036-1 / ISO 527)</b>           | 2.0 MPa                  |                        |
| <b>100 % modulus (CQP036-1 / ISO 527)</b>              | 1.0 MPa                  |                        |
| <b>Elongation at break (CQP036-1 / ISO 527)</b>        | 350 %                    |                        |
| <b>Tear propagation resistance (CQP045-1 / ISO 34)</b> | 4 N/mm                   |                        |
| <b>Service temperature (CQP513-1)</b>                  | -40 – 150 °C             |                        |
| <b>Shelf life (CQP016-1)</b>                           | 15 months <sup>B</sup>   | 12 months <sup>B</sup> |

CQP = Corporate Quality Procedure

<sup>A</sup>) 23 °C / 50 % r. h.<sup>B</sup>) storage below 25 °C

### DESCRIPTION

Sikasil® SG-500 CN 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 ASTM C 1184, ASTM C 920 (class 25, movement capability ± 25 %) and GB 16776
- Design tensile strength for dynamic loads:  $\sigma_{des} = 0.14$  MPa or 20 psi (ASTM)
- Wide adhesion range
- Excellent UV and weathering resistance
- Long term durability
- Quality product based on proven and constant quality raw materials

### AREAS OF APPLICATION

Sikasil® SG-500 CN is ideal 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 to ensure adhesion and material compatibility.

## CURE MECHANISM

Sikasil® SG-500 CN 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.

Before processing Sikasil® SG-500 CN 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 CN, press the adhesive to the joint flanks to get a good wetting of the bonding surface. No tooling agents must be used.

## Removal

Uncured Sikasil® SG-500 CN may be removed from tools and equipment with Sika® Remover-208 or an-other suitable solvent. 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 CN cannot be overpainted.

## Application limits

Recommended solution from Sika for structural glazing and window bonding are usually compatible to each other. These solutions consist of products such as Sikasil® SG, IG, WS and WT series. 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 CN, 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 Guideline  
Structural Silicone Glazing with Sikasil® SG Adhesives

## PACKAGING INFORMATION

Sikasil® SG-500 CN (A)

|      |        |
|------|--------|
| Drum | 260 kg |
|------|--------|

Sikasil® SG-500 CN (B)

|      |       |
|------|-------|
| Pail | 20 kg |
|------|-------|

## 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

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