BUILDING TRUST

PRODUCT DATA SHEET

Sikasil® SG-500

High-performance, 2-component silicone structural glazing adhesive

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Properties		Sikasil® SG-500 (A)	Sikasil® SG-500 (B)
Chemical base		2-component silicone	
Color (CQP001-1)		White / light grey	Black / dark grey / translucent
	mixed	Black / grey S6 / white	
Cure mechanism		Polycondensation	
Cure type		Neutral	
Density (uncured)		1.40 kg/l	1.07 kg/l / 1.03 kg/l [C]
	mixed	1.37 kg/l	
Mixing ratio	A:B by volume	10:1	
	A:B by weight	13:1 / 13.7:1 [C]	
Viscosity (CQP029-6)		1 100 Pa·s	300 Pa·s / 80 Pa·s [C]
Consistency		Paste	
Application temperature	ambient	5 – 40 °C	
Snap time (CQP554-1)		50 minutes [A]	
Tack free time (CQP019-3)		240 minutes [A]	
Shore A hardness (CQP023-1 / ISO 48-4)		45 / 40 [C]	
Tensile strength (CQP036-1 / ISO 527)		1.9 MPa	
100 % modulus (CQP036-1 / ISO 527)		1.1 MPa	
Elongation at break (CQP036-1 / ISO 527)		250 %	
Tear propagation resistance (CQP045-1 / ISO 34)		6 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
[C] Sikasil® SG-500 white color

DESCRIPTION

Sikasil® SG-500 is a 2-component, high-modulus, neutral-curing structural silicone adhesive. It is mainly used for structural glazing applications.

PRODUCT BENEFITS

- Outstanding UV and weathering resistance
- SNJF-VEC recognized (product code: 2433)
- Fire rated class B1 (DIN 4102-1)
- Contributes to LEED v4/v4.1 EQc 2: Low-Emitting Materials

Sikasil® SG-500, black

- Meets requirements of EN 15434 and ASTM C1184
- Structural sealant for use in structural sealant glazing kits covered by ETA-03/0038 issued by Technical Assessment Body Deutsches Institut für Bautechnik, Declaration of Performance 15754339, certified by notified product certification body 0757, certificate of constancy of performance 0757-CPR-596-7110760-1-7, and provided with CE marking
- Design tensile strength for dynamic loads: σ_{des} = 0.14 MPa (ETA)

AREAS OF APPLICATION

Sikasil® SG-500 is ideal for structural glazing and other 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.

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 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 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, 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 may be removed from tools and equipment with Sika® Remover-208 or another 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 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, 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 (A)

Pail	26 kg
Drum	260 kg

Sikasil® SG-500 (B)

Pail	20 kg

Sikasil® SG-500 (A+B)

Cartridge	490 ml
Mixer: MBLTX 14-22G by medmix	

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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