

Sikasil® SG-500 CN US

Two Part Structural Silicone Adhesive

Technical Product Data (typical values) *Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

Properties	Component A	Component B
Chemical base	2-C silicone	
Color (CQP ¹ 001-1)	White	Black
Color mixed	Black	
Cure mechanism	Polycondensation	
Cure type	Neutral	
Density (CQP 006-4)	1.4 kg/l approx.	1.08 kg/l approx.
Density Mixed	1.38 kg/l approx. = 11.52 lbs/gal	
Mixing Ratio	A:B by weight A:B by volume	13:1 10:1
Viscosity (CQP 029-6)	1,200 Pa s approx.	130 Pa s approx.
Consistency	Paste	
Application temperature	40°F to 105°F (5°C to 40°C)	
Snap time ² (CQP 554-1)	60 minutes approx.	
Tack free time ² (CQP 019-1)	270 minutes approx.	
Shore A-hardness (CQP 023-1/ ISO 868/ ASTM C-661)	40 approx.	
Tensile strength (CQP 036-1/ISO 37/ASTM D-412)	290 psi (2.0 N/mm ²) approx.	
Elongation at break (CQP 036-1/ISO 37/ASTM D-412)	350%	
Tear propagation resistance (CQP 045-1 / ISO 34)	34.3 pli (4.0 N/mm ²) approx.	
100% Modulus (CQP 036-1/ISO 37/ASTM D-412)	145 psi (1.0 N/mm ²) approx.	
12.5% Modulus (CQP 036-1/ISO 37/ASTM D-412)	29 psi (0.2 N/mm ²) approx.	
Movement accommodation capability (ASTM C 719)	+/- 12.5%	
Tension design stress under permanent load (EN 13022)	20 psi (0.14 N/mm ²)	
Shear design stress under permanent load (EN 13022)	1.45 psi (0.01 N/mm ²)	
Thermal resistance	4 hours	390°F (200°C)
Short term	1 hour	430°F (220°C)
Service temperature	-40° - 300°F (-40° - 150°C)	
Shelf life (storage below 75°F (25°C) (CQP 016-1)	15 months	12 months

¹CQP=Corporate Quality Procedure ²73°F (23°C) / 50% r.h.

Description

Sikasil®SG-500 CN US is a two part, high-modulus, neutral curing structural silicone adhesive. Sikasil®SG-500 CN US is manufactured in accordance with the responsible care program.

Product Benefits

- Meets requirements of ASTM C 1184, ASTM C 920 and GB 16776
- Broad adhesion range
- Resistant to UV and weathering
- Long term durability
- Quality product based on proven and consistent quality raw materials

Areas of Application

Sikasil®SG-500 CN US 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.

Industry



Cure Mechanism

Sikasil®SG-500 CN US starts to cure immediately after mixing the two components. The speed of the reaction depends mainly on the temperature; the higher the temperature, the faster the curing process. Heating above 122°F (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 the product, is significantly shorter than the snap time listed in the property table. For more information, please contact the Technical Service Department of Sika Industry (tsmh@us.sika.com).

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 will be given on request. Contact Technical Service at (tsmh@us.sika.com).

Mixing

Prior to processing with Sikasil®SG-500 CN US, mix both components homogeneously and air-bubble free; in the proper mixing ratio with an accuracy of +/- 10%. Most commercially available metering and mixing equipments are suitable.

While the A-part of Sikasil®SG-500 CN US is stable in air, the B-part is moisture sensitive and must only be exposed briefly to air. Advice on specific applications will be given on request. Contact Technical Service at (tsmh@us.sika.com).

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.

Tooling and Finishing

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

Removal

Uncured Sikasil®SG-500 CN US may be removed from tools and equipment with Sika®Remover-208 or another suitable solvent. Strictly follow solvent manufacturer's instructions for use and warnings. Once cured, the material can only be removed mechanically. Hands and exposed skin should be washed immediately using a suitable industrial hand cleaner and water. Do not use solvents on skin!

Overpainting

Sikasil®SG-500 CN US cannot be overpainted.

Limitations

Most Sikasil® WS, FS, SG, IG, WT, AS and other engineering silicone sealants manufactured by Sika are compatible with each other and SikaGlaze® IG Sealants, however in all cases for specific information regarding compatibility between various Sikasil (with other Sikasil®) and SikaGlaze® products please contact the Technical Service Department of Sika Industry at tsmh@us.sika.com. All other manufacturer sealants have to be approved by Sika before using them in combination with Sikasil®SG-500 CN US. Where two or more different reactive sealants are used, allow the first to cure completely before applying the next.

- While the A-part of Sikasil®SG-500 CN US is stable in air, the B-part is moisture sensitive and must be only briefly exposed to air.
- Sikasil®IG, SG, 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 CN US must be tested in advance.
- Where two or more different reactive sealants are used, allow

the first to cure completely before applying the next.

PART A:

WARNING: IRRITANT. Contains Siloxanes and Silicones, di-Me (CAS: 63148-62-9). Causes eye/skin irritation. Harmful if swallowed. May cause respiratory tract irritation.

WARNING! This product contains a chemical known in the State of California to cause cancer.

PART B: WARNING: COMBUSTIBLE, IRRITANT, SENSITIZER:

Contains Tetraethyl silicate (CAS: 78-10-4), Carbon black (CAS: 1333-86-4), N-[3-(triethoxysilyl)propyl]ethylenediamine (CAS: 5089-72-5), and trimethoxyvinylsilane (CAS: 2768-02-7). Keep away from heat, sparks, electrical equipment, and open flame. **DO NOT SMOKE.** Use only in well ventilated areas. Causes eye irritation. May cause respiratory tract irritation. May cause skin sensitization after prolonged contact. May cause gastrointestinal disturbance if swallowed. Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain, liver, kidney and nervous system damage. **Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal.**

WARNING! This product contains a chemical known in the State of California to cause cancer and birth defects or other reproductive harm.

HMIS

	Part A	Part B
Health	2	*2
Flammability	1	2
Reactivity	0	0
Personal Protection	B	B

FIRST AID

PART A and Part B: Eyes – Hold eyelids apart and flush thoroughly with water for 15 minutes. **Skin** – Remove contaminated clothing. Wash skin thoroughly for 15 minutes with soap and water. **Inhalation** –

Further information available at:
www.sikausa.com

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Remove to fresh air. **Ingestion** – Do not induce vomiting. Dilute with water. Contact physician. **In all cases contact a physician immediately if symptoms persist.**

Further Information

For further 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. It is highly recommended to read the actual Material Safety Data Sheet before using the product.

- **KEEP OUT OF REACH OF CHILDREN.**
- **NOT FOR INTERNAL CONSUMPTION.**
- **FOR PROFESSIONAL USE ONLY.**
- **KEEP CONTAINER TIGHTLY CLOSED.**

Copies of the following publications are available at www.sikausa.com:

- Material Safety Data Sheet
- Product Data Sheet

In case of emergency, call CHEMTREC at 800-424-9300, International 703-527-3887

Packaging Information

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

Value Basis

All technical data stated on this Product Data Sheet are based on the results of laboratory tests only. Actual measured data in the field may vary due to site specific conditions which are not known to Sika and beyond our control.

Handling And Storage

PART A: Avoid direct contact. Wear personal protective equipment (chemical resistant goggles/ gloves /clothing) to prevent direct contact with skin and eyes. Use only in well ventilated areas. Open doors and windows during use. Use a properly fitted NIOSH respirator if ventilation is poor. Wash thoroughly with soap and water after use. Remove

contaminated clothing and laundry before reuse.

PART B: Keep away from heat, sparks, sunlight, electrical equipment or flame. VAPORS MAY IGNITE AND EXPLODE. DO NOT SMOKE. Open doors and windows during use. Use adequate local and mechanical ventilation. Wear protective equipment (chemically resistant gloves/goggles/ clothing) to prevent direct contact with skin and eyes. Use properly fitted NIOSH vapor cartridge respirator if ventilation is poor. Wash thoroughly with soap and water after use. Remove contaminated clothing after use. Store product in tightly sealed containers in a cool, dry well ventilated area at temperatures below 75°F away from ignition sources. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material.

Clean Up

PART A: Use personal protective equipment (chemical resistant gloves/ goggles/clothing). Without direct contact, sweep up spilled or excess product and place in suitable sealed container. Dispose of excess product and container in accordance with applicable local, state, and federal regulations.

PART B: In case of spill, eliminate all ignition and heat sources, if safe to do so. Ventilate area. Open doors and windows. Wear chemical resistant gloves/goggles/clothing. In absence of proper ventilation use properly fitted NIOSH respirator. Confine spill, collect using noncombustible absorbent material and place in properly sealed container. Dispose of excess product in accordance with applicable local, state and federal regulations.

Limited Material Warranty

SIKA warrants this product for one year from date of installation to be

free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within shelf life. User determines suitability of product for intended use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor. **NO OTHER WARRANTIES IMPLIED OR EXPRESS SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.**

Legal Notes/Disclaimer

All information provided by Sika Corporation ("Sika") concerning Sika products, including but not limited to, any recommendations and advice relating to the application and use of Sika products, is given in good faith based on Sika's current experience and knowledge of its products when properly stored, handled and applied under normal conditions in accordance with Sika's instructions. In practice, the differences in materials, substrates, storage and handling conditions, actual site conditions and other factors outside of Sika's control are such that Sika assumes no liability for the provision of such information, advice, recommendations or instructions related to its products. The user of the Sika product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with the full application of the product(s).

Sika reserves the right to change the properties of its products without

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notice. All sales of Sika product(s) are subject to its current terms and conditions of sale which are available at www.sikausa.com or by calling 201-933-8800.

Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's most current Product Data Sheet, product label and Material Safety Data Sheet which are available at www.sikausa.com. Nothing contained in any Sika materials relieves the user of the obligation to read and follow the warnings and instruction for each Sika product as set forth in the current Product Data Sheet, product label and Material Safety Data Sheet prior to product use.



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