

Sikasil® SG-18

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.

Chemical base	1-C silicone	
Color	Black	
Cure mechanism	Moisture-curing	
Cure type	Neutral	
Density, uncured, Typical (CQP 006-4)	1.45 kg/l (1.45 g/cc)	
Non-sag properties	< 2 mm approx. (< 0.8")	
Application temperature	40°F to 105°F (5°C to 40°C)	
Skin time ¹	30 min	
Tack free time ¹	90 min	
Curing speed	(see diagram 1)	
Shore A-hardness, (ASTM D2240)	44	
Tensile strength, (ASTM D 412)	300 psi	
Elongation at break, (ASTM D 412)	300%	
Tear propagation resistance, (ASTM D624)	34 pli	
100% modulus, (ASTM D 412)	160 psi	
Movement accommodation factor, (ISO 11 600)	+/- 12.5%	
Service temperature	-40°F-302°F (-40°C-150°C)	
Shelf life (storage below 77°F (25°C))	Cartridge/Unipac	12 months
	Drum/Pail	15 months

¹ 73°F (23°C) / 50% r.h. CQP=Corporate Quality Procedure

Description

Sikasil® SG-18 is a neutral curing silicone adhesive with excellent adhesion to a wide range of substrates.

Product Benefits

- Outstanding UV and weatherability resistance
- Bonds well to glass, metals and coated metals
- Neutral cure

Areas of Application

Sikasil® SG-18 can be used as a structural glazing adhesive or residential window backbedding /glazing adhesive and for other bonding applications where superior resistance to UV radiation, high temperatures and weathering is required. Tests with original substrates and conditions must be performed to ensure adhesion and material compatibility.

Industry



Cure Mechanism

Sikasil® SG-18 cures by reaction with atmospheric moisture. The curing speed depends on the relative humidity and temperature. Heating above 122°F (50°C) is not advisable as it may lead to bubble formation. At low temperatures the water content of the air is lower and the curing reaction proceeds more slowly (see diagram below).

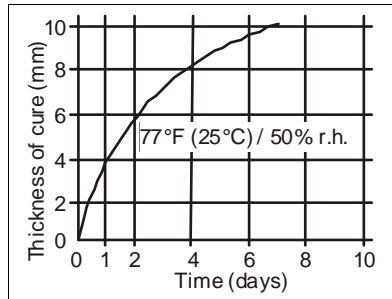


Diagram 1: Curing speed Sikasil® SG-18

Method of Application

Sikasil® SG-18 is resistant to UV radiation, fresh water, seawater and proprietary aqueous cleaning agents; temporarily resistant to fuels, mineral oils, vegetable and animal fats and oils; not resistant to organic acids, concentrated mineral acids, caustic solutions and solvents. The above information is offered for general guidance only. Advice on specific applications is available from the Technical Service Department of Sika Industry at tsmh@us.sika.com.

Method of Application

Surface preparation

Surfaces must be clean, dry and free from all traces of oil, grease, dust, rust, and other contaminants. To ensure good adhesion to treated metal surfaces, please use Sika® Aktivator 205 to prepare the substrate. Advice on specific applications is available from the Technical Service Department of Sika Industry at tsmh@us.sika.com.

Application

After suitable joint and substrate preparation, Sikasil® SG-18 is gunned into place. 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. Joints deeper than 0.6 inches (15mm) should be avoided. Advice on specific applications is available from the Technical Service Department of Sika Industry at tsmh@us.sika.com.

Tooling and Finishing

Tooling and finishing of Sikasil® SG-18 must be carried out within the skin time of the sealant or adhesive. When tooling freshly applied Sikasil® SG-18 press the adhesive into the joint to get a good wetting of the bonding surface. No tooling agents may be used.

Removal

Uncured Sikasil® SG-18 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 after use. Do not use solvents on skin!

Overpainting

SikaSil® SG-18 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. For specific information regarding compatibility between various Sikasil® 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® WS-305 CN.
- Where two or more different reactive sealants are used, allow the first to cure completely before applying the next.
- SikaSil® SG-18 may only be used in structural glazing or window bonding applications by experienced professionals.

- It is the end user's responsibility to determine the suitability of the product for their windows and conduct appropriate testing for verification.
- The compatibility of gaskets, backer rods, setting blocks and other accessory materials with Sikasil® SG-18 must be tested in advance.
- The above information is offered for general guidance only. Advice on specific applications will be given on request.

WARNING: IRRITANT, SENSITIZER. Contains Siloxanes and Silicones, di-Me (CAS#63148-62-9), butan-2-one O,O',O''-(methylsilyldiyne) trioxime (CAS#22984-54-9), Carbon black (CAS#1333-86-4) and Quartz (CAS#14808-60-7). Causes eye/irritation. May cause respiratory tract irritation. May cause skin sensitization. May be harmful if swallowed. **WARNING:** This product contains a chemical known to the State of California to cause cancer.

HMIS

Health	1
Flammability	1
Reactivity	0
Personal Protection	C

FIRST AID

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 - 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

Further information available at:
www.sikausa.com

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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

Cartridge	295 ml
Unipac	600 ml
Pail	4.5 gal
Drum	52 gal

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

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 launder before reuse.

Clean Up

Use personal protective equipment (chemical resistant goggles/gloves/clothing). Without direct contact, remove spilled or excess product and place in a suitable sealed container. Dispose of excess product and container in accordance with

applicable environmental 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.**

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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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