



General Guidelines

Structural Silicone Glazing with Sikasil[®] Adhesives



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Purpose and General Information

This document contains recommendations and hints for the application of Sikasil® SG adhesives in structural bonding applications. These guidelines are relevant for the following products:

- Sikasil® SG-500
- Sikasil® SG-500 CN
- Sikasil® SG-18
- Sikasil® SG-20
- Sikasil® SG-20+
- Sikasil® GS-630

The information herein is offered for general guidance only. Since structural sealant glazing is a critical application and conditions as well as substrates may vary greatly, the customer must test the suitability of the product for each specific project and contact Sika for advice.

Sikasil® adhesives in high demanding and critical applications, such as structural glazing or window bonding, may only be used after a detailed examination and written approval of the corresponding project details by the Technical Service Department of Sika Industry.

For detailed information about specific silicone products and surface pre-treatment agents please refer to the actual Product Data Sheets (PDS), Material Safety Data Sheets (MSDS) and Calculation Value Sheets.

Introduction

Sikasil® SG and Sikasil® GS adhesives are condensation-curing, one- and two-part silicone products suitable for bonding glass panes or insulating glass units to a support frame (usually: anodized aluminum, polyester powder-coated aluminium, PVDF-coated aluminium or stainless steel). This technique is known as structural silicone glazing.

1. Design and Joint Dimensioning

Joints must be properly dimensioned as changes are no longer possible after construction or adhesive application, respectively. 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 (wind, snow, climatic loads, etc.). Sika offers a comprehensive project service package including design reviews and structural joint dimensioning. For more information please contact the Technical Service Department of Sika Industry.

2. Working Place Conditions

The working place should be as dust-free as possible. Ideal conditions are 23°C (73°F) and 50% relative humidity. As these conditions are usually attainable only in laboratory, one should try to make the plant conditions as close as possible. Although Sikasil® SG and Sikasil® GS adhesives may be processed within 5 - 40°C, the optimum application temperature of the products is between 15 and 30°C.

All substrates must be stored under the same conditions (i.e. between 5 and 40°C) at least 24 hours prior to the application of Sikasil® SG or GS in order to avoid condensation on the surfaces.

3. Surface Pre-treatment

Surfaces must be clean, dry and free from oil, grease and dust. Place the glass or panel to be glazed. Care must be taken to not contaminate pre-treated surfaces during any phase of production. If contamination occurs, surfaces have to be pre-treated again.

The following information is offered for general guidance only. Advice on specific pre-treatment methods based on laboratory adhesion tests will be given on request. Please note that with the exception of clear float glass, Sika has to test the adhesion of structural silicone adhesives on a project-by-project basis on production-run samples of the original materials used in the specific project. It is binding to use the surface pre-treatment agents recommended in the laboratory report, otherwise

the warranty for the adhesion behaviour of Sikasil® silicone adhesives is null and void.

Substrate	Surface Pre-treatment
Float glass (including tempered, toughened, laminated and tinted types)	Sika®Cleaner-205 or Sika®Cleaner P*
Pyrolytically coated glass	
Ceramic-coated (enamelled) glass	Sika®Cleaner-205
Stainless steel	
Anodized aluminum	
Polyester powder-coated aluminum	
PVDF-coated aluminum	

* *Sika® Cleaner-205 leave marks on pre-treated surfaces. If this is not acceptable and the adjacent area can not be masked, Sika® Cleaner P can be used instead.*

Important note

Sika®Cleaner-205 is not a simple cleaning solvent but contains a bonding agent which forms an activating film on the substrate surface. On some surfaces, for example on certain glossy powder-coated aluminium profiles, this film may be visible and change the appearance of the profile. Therefore, it is important to treat and apply Sika®Cleaner-205 like a primer and to use masking tapes in critical (visual) areas if necessary.

3.1 Application Procedure of Sika® Cleaner-205

1. Moisten a clean, dry, oil-free and lint-free cloth or paper with the product and apply it on the surface. Make sure to turn the cloth or paper to expose new surface, or replace it regularly in order to avoid wiping residues back onto the surface. If the surface is not free of contaminant, the process has to be repeated.
2. Unlike ordinary cleaning agents, the surface treated with Sika® Cleaner-205 must not be dried subsequently with a cloth or paper!
3. Drying time: The required minimum drying times are as follows (depending on the environmental conditions in the workshop):
 - 10 minutes if temperatures are at least 5°C
 - 5 minutes if temperatures are at least 10°C
 - 2 minutes if temperatures are at least 15°CIn case of doubt, contact Technical Service Department of Sika Industry.
4. If cleaned (“activated”) parts are not bonded/sealed immediately, protect them against subsequent contamination.
5. Adhesive application should take place within 2 hours after the application of Sika® Cleaner-205. Otherwise the procedure as described above has to be repeated before bonding.

For more details about Sika® Cleaner-205 refer to the actual Product Data Sheet.

3.2 Application Procedure of Sika® Cleaner P

Sika® Cleaner P is a solvent-based cleaning agent and is applied by the “two-cloths-method”:

1. Moisten a clean, dry, oil-free and lint-free cloth or paper with Sika® Cleaner P and rub it over the surface. Make sure to turn the cloth or paper to expose new surface, or replace it regularly, in order to avoid wiping residues back onto the surface.
2. Then wipe-off the surface using a clean, dry, oil-free and lint-free cloth or paper. Never wait until Sika® Cleaner P has evaporated from the surface; because dissolved contaminants would be left behind.
3. Repeat this procedure until the surface is clean.
4. If you are not bonding the cleaned parts immediately, protect them against subsequent contamination.
5. If more than two hours have passed since cleaning, always repeat the cleaning process before bonding.

For more details about Sika® Cleaner-P refer to the actual Product Data Sheet.

4. Processing and Product Application

4.1 Two-component Structural Silicone Adhesives

4.1.1 Preparation

- After opening the 200 litre drum containing the A-part (base) remove the plastic cover sheet.
- After opening the pails containing the B-part (catalyst) cut open the welded plastic bag and attach it to the outer edge of the pail with tape. This prevents the inliner to be sucked in by the pump. Remove the cover foil.
Alternatively – if the pump is equipped with a filter - the whole inliner containing the B-component may be turned around and opened by cutting a cross.
- Sikasil® SG-500 A-part as well as B-part have a paste-like consistency. To process the two components, a pump system with follower plate is required.
- Due to its reactivity with atmospheric moisture, the B-part of Sikasil® SG-500 has not to be exposed to air for more than 5 minutes. Should a thin layer of a resinous material have developed on top, it has to be removed with a spatula or a similar tool before installing the container under the pump.
- Neither the A-part nor the B-part require stirring because both components show very little tendency to separate.

4.1.2 Mixing

To obtain the ultimate physical properties indicated in the corresponding Product Data Sheet, Sikasil® SG-500 2-component adhesives have to be thoroughly mixed using an airless mixing system.

For mixing ratio by weight and volume, refer to the corresponding Product Data Sheet. Only small deviations of $\pm 10\%$ from the mixing ratio indicated in the Product Data Sheet are tolerated. For a proper adjustment of the mixing ratio consult the manual of the pump equipment. If further assistance is required, contact the equipment manufacturer. Lot matching of Sikasil® SG-500 catalyst and base is not required.

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 (pot life) indicated in the Product Data Sheets. In order to maintain a long life time of the static mixer, the alarm on the equipment has to be set to the values shown in the following table.

Product	Mixer open time	Alarm time (equipment)
Sikasil® SG-500	approx. 8 - 10 min	approx. 6 min
Sikasil® SG-500 CN	approx. 7 – 9 min	approx. 6 min

Above mentioned times significantly vary with different temperatures and must be verified by tests under actual conditions. If the alarm time is set too long cured rubber particles are visible in the extruded material.

Sikasil® SG-500 two-part silicone adhesives are usable with commercially available two-part silicone mixing and dispensing equipment with static or dynamic mixers. For recommendations contact System Engineering Department of Sika Industry.

During shutdown, it is recommended that the dispensing and mixing equipment are purged with non-catalyzed base (A-component) in order to retard the curing of the adhesive. Usually, the necessary amount of A-part to purge corresponds to the threefold volume of the mixing system (for systems with a static mixer).

Alternatively, a freezer can be used for downtimes up to 24 hours (temperature -40°C or below). However, the reaction will not stop at -40°C but will only be slowed down.

During prolonged production breaks additionally flushing with a cleaning agent such as Sika® Mixer Cleaner is recommended. Cleaning the mixer by burning the silicone residues is not advisable.

When restarting production after shutdown, mixed silicone must be purged until obtaining a homogeneous mixture. Depending on the equipment, between 1 and 3 liters of Sikasil® SG-500 are needed for that purpose if static mixers are used. The quality of the mixing and the correctness of the mixing ratio must be checked (butterfly or marble test, mixing ratio by weight, see chapter 6 “Quality Assurance” and ff).

4.1.3 Application

Sikasil® SG-500 2-component silicone adhesives must be applied evenly and free of air bubbles. Tooling of the joint should be carried out as soon as possible after adhesive application but not later than half the pot life (snap time) indicated in the actual Product Data Sheet. It must be ensured that the joint is completely filled and that the joint dimensions correspond to the calculated values.

Detergent or soap and water are not allowed for tooling.

4.2 One-component Structural Silicone Adhesives

4.2.1 Preparation

- If working from drums or pails open the container, cut open the welded plastic bag and attach it to the outer edge of the vessel with tape. Remove the cover foil.
- All one-component Sikasil® SG and GS adhesives cure with atmospheric moisture. These products may not be exposed to air for more than 5 minutes.
- Before installing the drum or pail into the pump equipment, cured material under the follower plate have to be removed thoroughly.
- If working from cartridges or unipacks, follow the instructions given by the gun manufacturer.

4.2.2 Application

Sikasil® SG and Sikasil® GS adhesives are applied by equipment with a metering pump, or manually directly from the cartridge or unipack.

The adhesive must be applied evenly and free from air bubbles. These one-component product form a skin after a certain time (skin time), which varies according to humidity and temperature. For further details refer to the actual Product Data Sheets. Tooling and smoothing of joints should be carried out as soon as possible after the adhesive application and not later than half of the skin time indicated in the actual Product Data Sheet. It must be ensured that the joint is completely filled and that the joint dimensions correspond to the calculated values.

Detergent or soap and water are not allowed for tooling.

4.3 Masking of Areas Adjacent to the Joints

To assure neat bond lines and protect areas adjacent to the structural joint, use a masking tape. The tape must not touch the pre-treated surface areas to which the silicone has to adhere. The tape should be removed immediately after tooling. Do not wait longer than 5 minutes or joints might be damaged.

5. Movement of Bonded Elements

Bonded units should not be exposed to stress until certain strength has developed. Since adhesion and strength build-up depend on the adhesive used, environmental conditions and the substrates, respectively, only general recommendations regarding the time can be given. If the situation is ambiguous temporary mechanical supports, retaining devices or Sika® Spacer Tape HD should be used to prevent loads acting on the joint during storage, transportation and installation. For more information please contact the Technical Service Department of Sika Industry.

Step	Conditions	Time after bonding 1-component adhesives	Time after bonding 2-component adhesives
Initial curing and adhesion build-up	Store units stress-free in horizontal position	7 days	1 day
Strength-build up and increase of adhesion	Store units with dead-load support vertically	8 - 14 days	2 - 3 days
Further strength and adhesion increase	Transportation of units vertically w/ support	15 - 21 days	4 - 7 days
Ultimate strength and adhesion reached	Installation of Elements	> 21 days	> 7 days

The structurally glazed units must not be moved to the job site until the adhesive has fully cured and it can be demonstrated through quality control testing that the adhesive has achieved full adhesion. Transportation of elements is possible earlier than stated in the table above if tensile adhesion tests on H-specimens (see chapter 6 "Quality Assurance") kept under the same conditions as the bonded elements give a value of 0.7 N/mm² and the failure mode is ≥95% cohesive.

Depending on the factory conditions and organization of the production process, different times for movement of bonded elements can be agreed upon. This requires an audit of the customer's production by the Technical Service Department of Sika Industry.

6. Quality Assurance

A perfect result means carrying out each processing step perfectly. Sika therefore recommends that structural glazing applicators install a strict quality control system. Quality control is the primary responsibility of the processor but Sika will assist customers in setting up a comprehensive program and train staff to carry out the mandatory tests.

The following sections describe quality procedures and a schedule when to run these tests. Local and regional regulations such as EOTA ETAG 002 (“Guideline for European Technical Approval for Structural Sealant Glazing Systems [SSGS]”) may require a different quality control scheme. Please contact your local Sika office or the Technical Service Department of Sika Industry for further information.

6.1 Testing the Mixing Ratio (2-component products only)

The easiest way to check the mixing ratio is by weight.

- In normal mixing and metering systems, the two components can be fed separately via special valves.
- The balance should be as accurate as 0.1 g
- Pump both components simultaneously. To achieve maximum accuracy, extrude at least 0.5 litre of component A.
- Weigh the components and calculate the mixing ratio.
- For the correct mixing ratio refer to the corresponding Product Data Sheet.

Important note

If the ratio by weight is outside the $\pm 10\%$ range stop work! Adjust the mixture to the required ratio before continuing. In the event of problems with setting the mixing ratio, please contact the equipment manufacturer. Another good way of checking the mixing ratio is to compare the pot life (snap time) of the machine-mixed material with the pot life of a mixture weighed by hand in an exact ratio as stated in the corresponding Product Data Sheet.

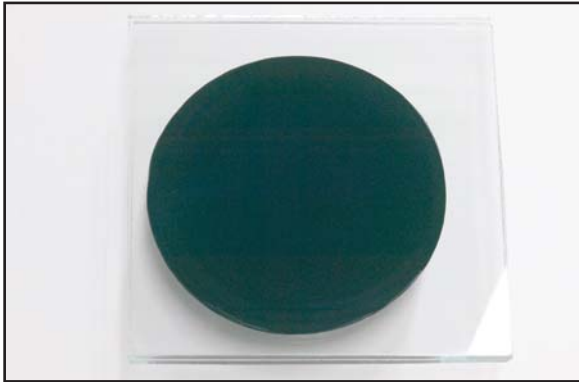
6.2 Marble Test for Homogeneity (2-component products only)

The mixture must be homogeneous to ensure that Sikasil® SG-500 has the ideal properties. This can be tested by the marble test (glass plate test):

- Apply a cone of mixed Sikasil® SG-500 to a float glass plate.
- Take a second glass pane and press it onto the pane with the adhesive, taking care to exclude air bubbles.

Important:

If you see white or deep-black strips, or pronounced light-gray marbling, the adhesive is not properly mixed or an insufficient amount of material was discharged after the last shutdown. Never use such material for bonding. To eliminate the defect, follow the equipment manufacturer's instructions. If a static mixer is in use, it may have to be replaced.



Picture 1: Positive test = ideal mixing



Picture 2: Negative test = inadequate mixing

6.3 Butterfly Test for Homogeneity (2-component products only)

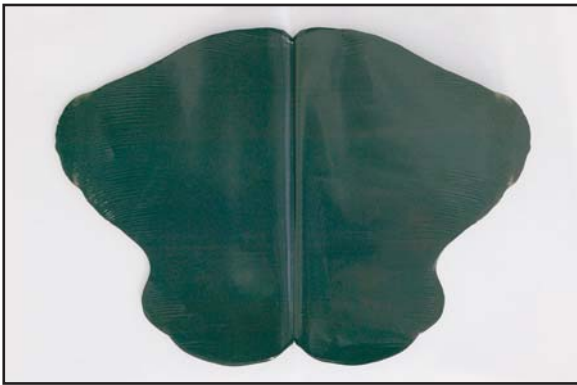
The butterfly test is an alternative to the marble test.

- Fold a sheet of paper down the center and open it again.
- Apply mixed Sikasil® SG-500 over the fold.
- Fold the paper again and press it together that the silicone adhesive spreads out. Hint: a cartridge can be used to roll over the paper.
- Unfold the paper. The silicone adhesive must have a homogeneous color.

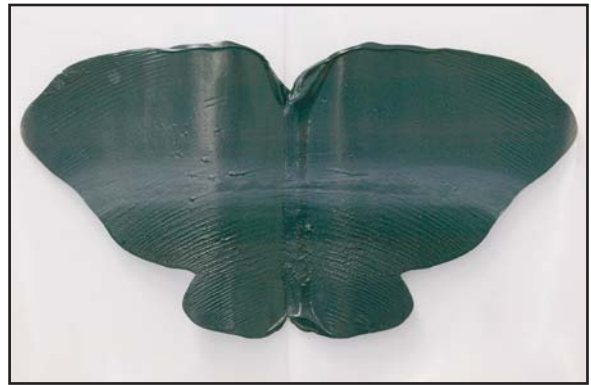
Important note

If you see white or deep-black strips, or pronounced light-gray marbling, the adhesive is not properly mixed or an insufficient amount of material was discharged after the last shutdown. Never use such material for bonding. To eliminate the defect, follow the equipment manufacturer's instructions.

If a static mixer is in use, it has to be cleaned or replaced. After an adequate curing time, double check the mixing quality by cutting open the thicker center section of the adhesive and checking it for streaks and marbling.



Picture 3: Positive test = ideal mixing



Picture 4: Negative test = inadequate mixing

6.4 Pot Life (Snap Time) Testing (2-component products only)

- Extrude 10 to 20 ml freshly mixed silicone adhesive (purge mixer sufficiently) from the machine into a small plastic cup (for example made of polyethylene).
- Stir it briefly and vigorously with a wooden spatula, and then remove the spatula.
- Repeat this operation every 5 minutes for Sikasil® SG-500 and SG-500 CN.
- The pot life or snap time is the time from extrusion of the silicone adhesive until the point at which it no longer forms long strings when the spatula is removed, but breaks off in short lengths.
- The measured value should not deviate by more than 25% from the pot life indicated in the certificate of analysis supplied with each batch of product.

Please be aware of the fact that the snap time strongly depends on the temperature of the material.



Picture 5: *Material shows paste-like behaviour: snap time not yet reached*



Picture 6: *Material shows rubber-like behaviour: snap time reached*

6.5 Skin Time and Tack-free Time (1-component products only)

- With one-part silicone adhesives, check the skin-over time and tack-free time as follows:
- Using a spatula, apply about 30 g of the adhesive to paper or film in a thickness of about 3 to 4 mm.
- Test every three minutes whether the adhesive surface has changed by probing with a clean finger tip.
- The skin-over time is the point at which the adhesive no longer sticks to the finger. Tack-free time is the point at which the surface feels dry (no longer tacky).

The skin-over time given in the Product Data Sheets was determined under standard climatic conditions (23 °C, 50 % relative humidity). Higher temperature and higher humidity reduce the skin over time and tack-free time. If there are drastic deviations (more than $\pm 50\%$) from the values given in the acceptance test certificate, discontinue bonding and consult the Technical Service Department of Sika Industry.



Pictures 7 - 9: Press the finger tip lightly on the adhesive and lift off. The skin time is the point at which the adhesive no longer sticks to the finger (image on the right).

6.6 Shore A Hardness Measurement

Check the Shore A hardness according to ISO 868 using a conventional trailer pointer device. The test specimens must have a smooth, flat surface and a thickness of at least 6 mm. This Shore A hardness measurement is an indication of a correct mixing ratio and thru-cure speed. The minimum Shore A hardness of Sikasil® structural glazing adhesives after 24 hours at room temperature is indicated in the following table:

Product	Shore A Hardness
Sikasil® SG-500	≥ 30
Sikasil® SG-500 CN	≥ 25
Sikasil® SG-18	≥ 15
Sikasil® SG-20	≥ 12
Sikasil® SG-20+	≥ 15
Sikasil® GS-630	≥ 12

Important note

The above mentioned values were determined at 23°C / 50% relative humidity. Since temperature and – for 1-component products also humidity – have a significant influence on the curing speed of condensation-curing silicone adhesives, actual Shore A hardness values may vary depending on the factory conditions.

6.7 Peel Adhesion Test

- Extrude a bead of Sikasil® SG or GS of at least 15 cm length onto a clean substrate of original material (pre-treatment exactly as in production line).
- Draw a template (doctor blade) over the bead to ensure it is of uniform size (about 15 mm wide and 6 mm high).
- Store the test specimens at room temperature for 24 hours (2-component products) or 72 hours (1-component products), respectively.
- Carry out the test by cutting approx. 3 cm of one end of the bead from the substrate with a sharp knife or glass scraper.
- Fold back the loose end at an acute angle of about 30°, and try to detach the cured rubber from the substrate.
- If the cured silicone cannot be detached, use the knife or glass scraper to cut it through to the substrate (see picture below) several times while still pulling.
- Repeat this procedure until at least 50% of the bead length has been tested.

In the test carried out after 24 hours or 72 hours, respectively, the bead must not detach from the substrate during pulling (i.e. 100 % cohesive failure).



Picture 10: Peel adhesion test

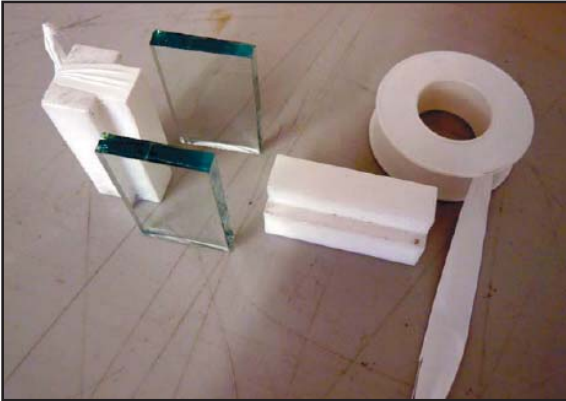
6.8 Tensile Adhesion Tests on H-specimens

H test specimens with a joint dimension of 12 x 12 x 50 mm are produced for the tensile test.

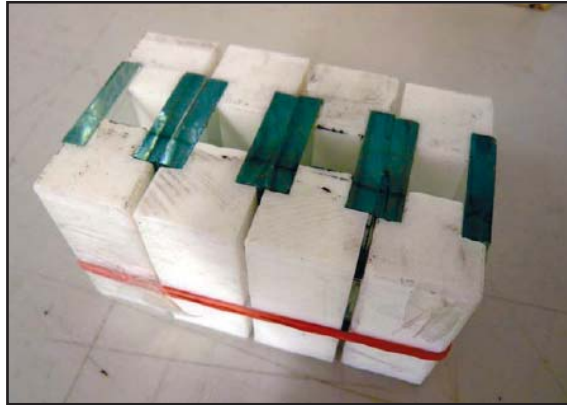
- For this purpose, use original materials that have been pre-treated like on the production line.
- Fix the glass and/or metal test specimens to be bonded, with spacers and, if applicable, distance pieces such that a joint measuring 12 x 12 x 50 mm can be filled.
- Prepare at least 2 bubble-free test specimens per test series with Sikasil® silicone adhesive. Remove excess material with a spatula or other tool.
- Demold the test specimen after storage at room temperature (remove spacers, adhesive tape or clamps).
- Determine the mechanical parameters (tensile strength) after at least 72 hours (2-component products) and 21 days (1-component products) by means of a tensile testing equipment or other suitable apparatus (pulling speed: 5 mm/min).

If a tensile strength of less than 0.7 MPa (Sikasil® GS-630: 0.5 MPa) is attained talk to Sika before continuing. The failure mode must be at least 95% cohesive.

For details regarding this tensile adhesion test please refer to Sika's Corporate Quality Procedure CQP 555-1 which is available upon request.



Picture 11: PTFE spacers, PTFE tape (recommended for 1-component adhesives) and substrate pieces (e.g. glass)



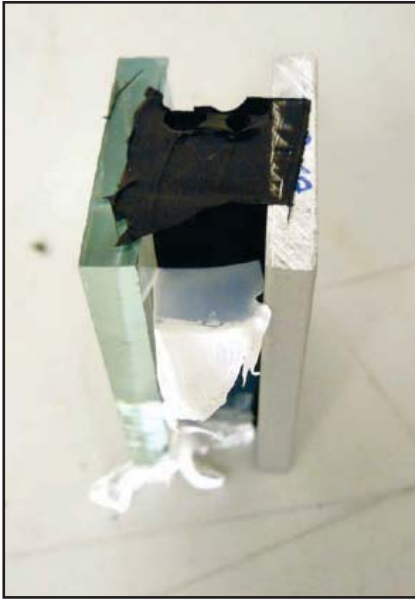
Picture 12: Arrangement and fixation of the samples with a rubber band and tape



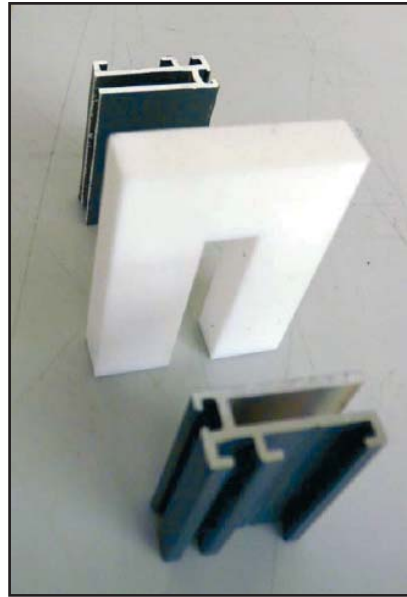
Picture 13: Injection of the silicone adhesive into the joint



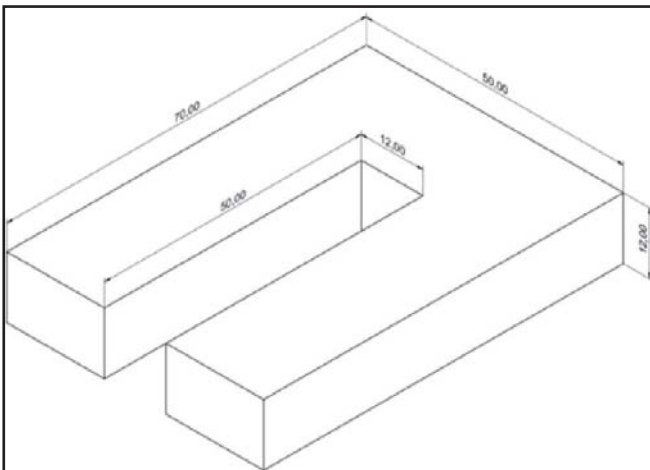
Picture 14: Removal of excess of silicone adhesive



Picture 15 Removal of PTFE tape after 7 days (1-component adhesives).
The PTFE spacers should be removed after 1 day already.



Picture 16 Alternative test arrangement (suitable for profiles)



Drawing 1 Dimensions of PTFE jig for alternative test arrangement

6.9 Visual Inspection

Each bonded element should be inspected visually in order to avoid mistakes in installation and adhesive application. The following should be checked for each panel:

- Correct joint dimensioning according to the drawings
- Complete joint filling according to drawings
- No bubble inclusions in the joint
- Correct installation of spacer tapes, gaskets, setting blocks, dead load support (if applicable).

6.10 Factory Deglazing

The main purpose of this test is to identify joints that are inadequately filled as a result of difficult joint design (deep, narrow or L-shaped joints). Deglazing should be carried out before moving the bonded elements to the jobsite or when the adhesive has cured completely throughout.

- Using a sharp knife, cut out an adhesive tab down as far as the spacer tape or spacer gasket. Cut as close as possible to the glass/metal interface so that approx. 1 to 2 mm of adhesive remains on the adhesive surfaces: Make one cut perpendicular to the joint and two cuts approximately 10 cm apart parallel to the glass and metal.
- Pull the adhesive tab out of the joint at a 90° angle. The adhesive must tear 100% cohesively. It must not detach from either of the two adhesive surfaces and must not show any air bubbles.
- Check the joint dimensions and compare with values provided in the drawings and approved by Sika. Notify the Technical Service Department of Sika Industry immediately if the joint dimensions do not match the definitions in the drawing.
- Immediately after the test, reseal the cut-out joint using the adhesive recommended by Sika. Prior cleaning is not necessary if the cut surfaces are clean and smooth, and sealing is carried out immediately after the test. When the repair adhesive has completely cured, the element can be installed in the façade (see chapter 5).
- In the case of L-shaped or very deep joints, Sika recommends completely cutting out the glass pane and removing it. This allows a more accurate check on joint filling and air inclusions.

The number and frequency of deglazing tests should be coordinated with Sika.



Picture 17: Good adhesion, deglazing test positive



Picture 18: Adhesive failure, deglazing test negative

6.11 Recommended Basic Quality Control Scheme

Test	Chapter	Substrate	Frequency	Remark / Detailed Description	Requirement
1 Mix Ratio by Weight	6.1	n/a	daily before start of production each time base (A) or catalyst (B) are changed	Only for 2-component products	Sikasil® SG-500 & Sikasil® SG-500 CN 11.7:1 to 14.3:1 (A:B)
2 Snap Time	6.4	n/a	daily before start of production each time base (A) or catalyst (B) are changed	Only for 2-component products, required values only valid for 23°C	Sikasil® SG-500: 30-70 min Sikasil® SG-500 CN: 30-80 min
3 Marble/Butterfly Test	6.2 & 6.3	n/a	daily before start of production each time base (A) or catalyst (B) are changed	Only for 2-component products	No white or deep black stripes, no marbling
4 Skin-over Time	6.5	n/a	daily before start of production each time a new batch is used	Only for 1-component products, required values only valid for 23°C / 50% relative humidity	Sikasil® SG-18: 15-45 min Sikasil® SG-20: 5-35 min Sikasil® SG-20+: 15-45 min Sikasil® GS-630: 5-35 min

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Test	Chapter	Substrate	Frequency	Remark / Detailed Description	Requirement
5 Shore A hardness	6.6	n/a	daily before start of production each time base (A) or catalyst (B) are changed or each time a new batch used	After 24 hours @ room temperature	Sikasil® SG-500: ≥30 Sikasil® SG-500 CN: ≥25 Sikasil® SG-18: ≥15 Sikasil® SG-20: ≥12 Sikasil® SG-20+: ≥15 Sikasil® GS-630: ≥12
6 Peel Adhesion	6.7	Glass & Frame	1 specimen daily before start of production each time base (A) or catalyst (B) are changed or each time a new batch is used	After 24 hours (2-component products) or 72 hours (1-component products) in the factory (same conditions as bonded elements are stored)	95% cohesive failure
7 Tensile Adhesion (H-specimen)	6.8	Glass & Frame	2 specimens daily before start of production each time base (A) or catalyst (B) are changed or each time a new batch is used	After 72 hours (2-component products) or 21 days (1-component products) in the factory (same conditions as bonded elements are stored)	≥ 0.7 MPa & 95% cohesive failure (Sikasil® SG-500, Sikasil® SG-500 CN, Sikasil® SG-18, Sikasil® SG-20, Sikasil® SG-20+); ≥ 0.5 MPa & 95% cohesive failure (Sikasil® GS-630)
8 Visual Inspection	6.9	Panel	Each day and each panel assembled	Check for: complete joint filling according to drawings bubble inclusions in the joint correct installation of spacer tapes, gaskets, setting blocks, dead load support (if applicable)	Joint dimensions correspond to drawings; no gas inclusions are allowed; accessories must be installed according to drawings

6.12 Recommendations for Logbook Content

The production/quality control logbook for Structural Glazing should contain the following information:

General

- Project/job name
- Date
- Production line designation (if applicable)
- Progressive number of logbook sheet

Panel Information

- Curtain wall panel code
- Progressive number (indicate 1st panel after change of structural silicone base (A) or catalyst (B) change)

Bonding Substrate & Surface Pre-treatment Information

- Metal frame finish (anodized, PPC, PVDF, stainless steel)
- Type of glass (float, enamel coated, pyrolithic coating)
- Type of cleaning agent for frame and glass
- Batch numbers and expiry dates for cleaning agents
- If applicable: type of primer for frame and/or glass
- Batch numbers and expiry dates for primers

Structural Silicone & Mixer Cleaner Information

- Type of structural silicone
- Batch numbers and expiry dates of structural silicone (A and B in case of 2-component products)
- Type of mixer cleaner (usually: Sikasil® Mixer Cleaner)
- Batch numbers and expiry dates for mixer cleaner

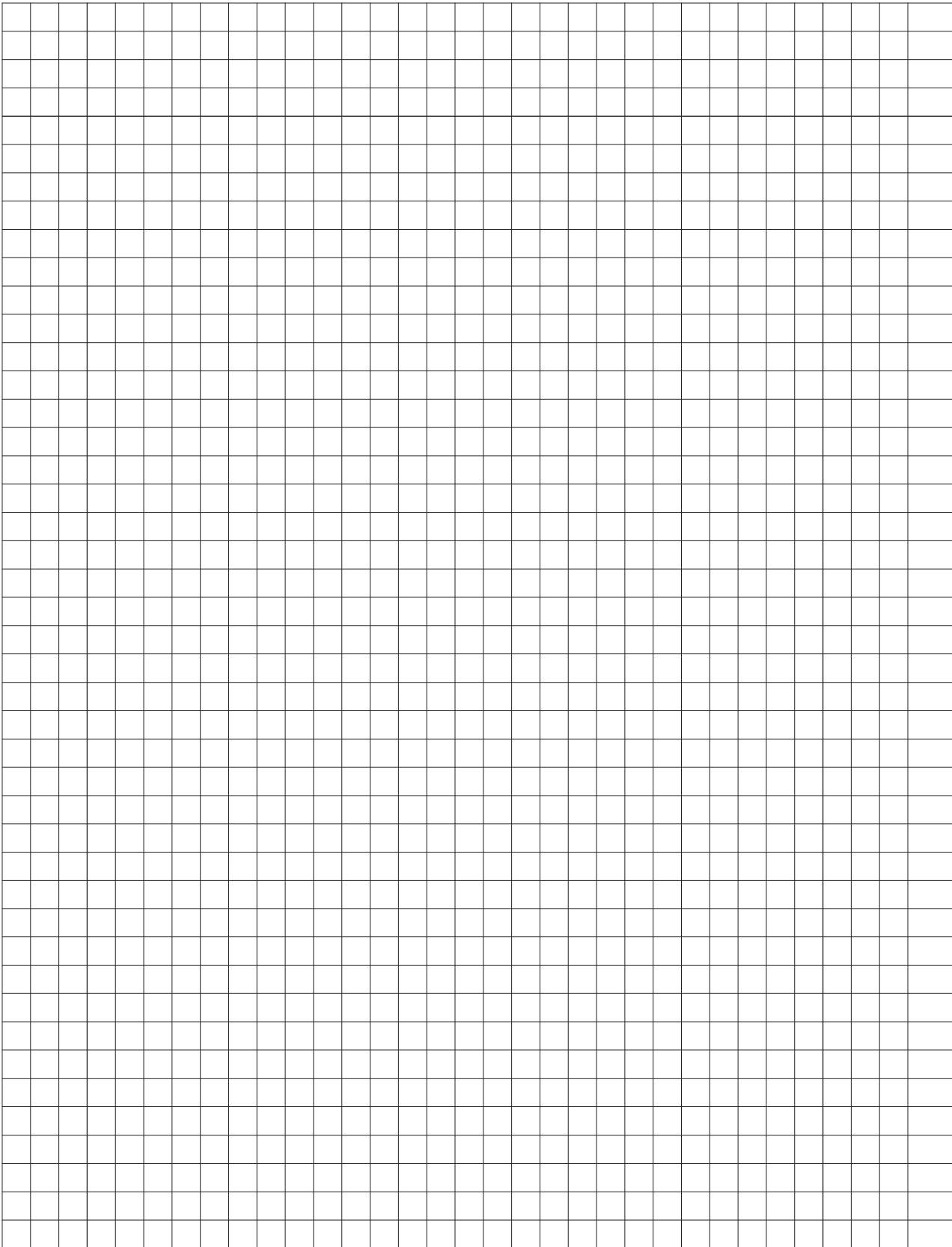
Factory Conditions

- Temperature: 5 - 40°C
- Relative humidity: no restrictions, if B-part is sufficiently protected

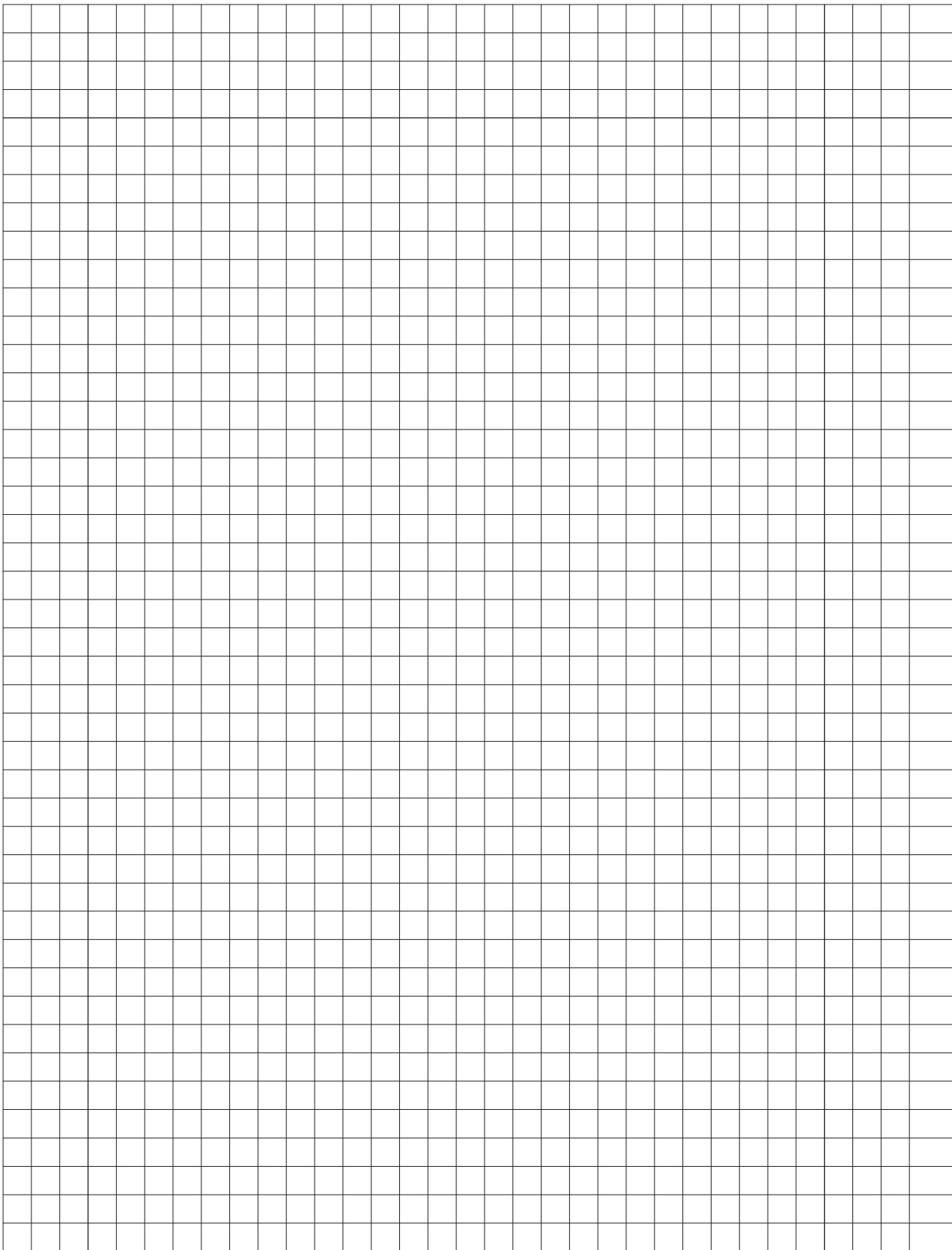
Quality Control Results

- Mixing ratio (morning/afternoon/change of base or catalyst) in grams and parts
- Snap time (morning/afternoon/change of base or catalyst) or skin-over time, respectively in minutes
- Butterfly test (morning/afternoon/change of base or catalyst): 100 % = no marbling
- Shore A hardness (morning/afternoon/change of base or catalyst)
- Peel adhesion test (time sample prepared, substrate, failure mode - % cohesive failure)
- Tensile adhesion test (time sample prepared, substrates, failure mode - % cohesive failure, tensile strength in MPa)
- Visual Inspection results (OK or failures detected)

Notes

A large grid of graph paper for taking notes, consisting of 20 columns and 30 rows of small squares.

Notes



Legal Notes

The information contained herein and any other advice 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 accordance with Sika's recommendations. The information only applies to the application(s) and product(s) expressly referred to herein and is based on laboratory tests which do not replace practical tests. In case of changes in the parameters of the application, such as changes in substrates etc., or in case of a different application, consult Sika's Technical Service prior to using Sika products. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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