



# STRUCTURAL GLAZING PROCEDURES



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# I. PROJECT CHECKLIST

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The list of items below must be completed for a SILICONE STRUCTURAL GLAZING PROJECT to be compliant with best practices and to be eligible for a Tremco Structural Glazing Warranty. As each item is completed, record the date in the appropriate space. For items that are not applicable on a project, please mark "NA" (not applicable).

## DESIGN DETAILS

### Date Completed

\_\_\_\_\_ CUSTOMER submits shop and elevation drawings to TREMCO.

\_\_\_\_\_ CUSTOMER submits maximum positive and negative wind load force values for the project to TREMCO.

\_\_\_\_\_ CUSTOMER submits metal finish/paint code for the project to TREMCO.

\_\_\_\_\_ TREMCO provides project specific shop drawing review letter.

## ADHESION AND COMPATIBILITY TESTING [AND NON-STAIN TESTING IF REQUIRED]

### Date Completed

\_\_\_\_\_ CUSTOMER provides TREMCO with representative sample of project-specific metal (including finish).

\_\_\_\_\_ CUSTOMER provides TREMCO with representative sample of project-specific glass.

\_\_\_\_\_ CUSTOMER provides TREMCO with representative sample of project-specific accessories, including setting blocks, spacers and gaskets.

\_\_\_\_\_ CUSTOMER provides TREMCO with representative sample of project-specific porous substrates for sealant stain testing when required.

\_\_\_\_\_ TREMCO provides lab report including test date(s).

## QUALITY ASSURANCE

- CUSTOMER completes and documents daily QC tests as outlined in this manual.
- CUSTOMER deglazes shop units to verify adhesion and documents on log sheets.
- CUSTOMER provides TREMCO with documentation of QC tests performed (as noted above).

## II. INTRODUCTION

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Tremco, as a recognized supplier of structural silicone sealants and compatible glazing materials, understands the high performance requirements and potential liabilities inherent to structurally glazed walls. For these reasons, Tremco offers preconstruction project reviews and testing programs to ensure product performance characteristics and glazing integrity. This program, founded in industry practice and specifications, is offered to our clients at no additional charge and demonstrates Tremco's commitment to quality and attainment of the highest standards.

Each structurally glazed project in which Tremco is involved is reviewed and tested in accordance with the parameters of this in-house program. Pertinent recommendations and results are shared with the customer with the assistance of Tremco. Each member of this team has a keen sense of commitment to the success of each project.

### A. REQUIRED INFORMATION

Following is an overview of the minimum information required by Tremco prior to the beginning of each structural glazing project.

General information on the project such as:

- Project title, size and location
- Architect and consultant involved in the project
- Fabricator
- Glazing and caulking subcontractors
- Glazing start and completion dates

Review of the structural glazing details to identify:

Proper use of Tremco glazing materials including sealants, gaskets, tapes and setting blocks.

Proper tensile bead location. Structural tensile beads are normally located on the interior face of the lite or panel (#2 or #4 surface) with bonding to a structurally sound substrate such as a horizontal or vertical aluminum mullion with a specified architectural finish.

Confirmation of glass supplier and types (e.g., monolithic, I.G. unit, laminated) and identification and description of coatings (e.g., reflective or opacifier) with their respective sizes approved for structural glazing.

Confirmation of coating/anodizing company, identification of coating (type, name, code and batch number) and location of metal and substrate finishes. Mill finished substrates are not acceptable for structural glazing applications.

Verification of proper sealant selection and usage.

Project specification review to identify:

Design windload force requirements for the project (positive and negative windload force).

Proper tensile bead sizing: the sealant bite or sealant contact depth (SCD) is calculated from the design wind load and glass dimensions. Based on these calculations, Tremco recommends a minimum tensile bead size of 1/4" x 1/4" (6 mm x 6 mm). Tensile beads (sealant bite) exceeding 1/2" (13 mm) warrant special consideration as sealant curing characteristics may be affected. Please consult your Tremco Technical Sales Representative for special guidelines, or contact us by clicking "Ask the Expert" under the Technical Resources Tab on the Tremco website [www.tremcosealants.com](http://www.tremcosealants.com).

Identify the type of structural glazing application (2-sided, 4-sided, sloped), on-site or in-plant application, vision and/or spandrel application.

Testing designated and required beyond that typically done.

Information and/or performance requirements specific to the project.

Substrate requirement for adhesion testing:

Substrates typically tested in order to determine proper cleaning techniques and priming requirements include aluminum framing and glass or other glazing panels.

Substrates should be submitted to Tremco Technical Services Department and be representative of those to be used on the actual project (production run sample). See Technical Service Bulletin No. S-08-47 (Lab Testing Requirements) in Appendix.

Adhesion testing is performed according to Tremco and/or ASTM C794 methods. Results of testing are normally available 4 to 6 weeks after receipt of the substrates.

Identification of substrate in contact with the silicone structural glazing sealant:

Tremco will verify that all the elements installed within the glazing pocket are compatible when in contact with the silicone sealant (tensile bead) and will not affect its in-place performance.

Compatibility testing can be run according to Tremco Modified ASTM C1087. See Technical Services Bulletin No. S-08-47 (Lab Testing Requirements) in Appendix. The test will determine color change or adhesion loss as a result of sealant contact or proximity of incompatible materials.

Substrates to be tested include, but may not be limited to, setting blocks, structural spacer (tapes or gaskets), compression gaskets, insulating glass edge seals, glass laminates, backer rod, weatherseal, and thermal break.

## B. REPORTING:

Upon completion of the drawing and specification review and adhesion and compatibility testing, a formal report is issued which details recommendations and test results specific to the success of the individual project. These results and recommendations are intended to serve as a base of information which should be confirmed on actual project applications at ongoing intervals as described in the following structural glazing procedures. This promotes consistent performance and quality and confirms laboratory results.

Tremco Technical Services will issue a report(s) for the structural glazing application after all evaluation and testing for the specific project are completed. Any work done beyond this point by the contractor without the letter of approval becomes the contractor's sole responsibility.

## C. PUMP MAINTENANCE

Refer to your pump manufacturer's guidelines for specific instructions.

### III. TREMCO CONTACT INFORMATION

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Technical Services: 866.209.2404

Customer Service

United States: 800.321.7906

Canada: 800.363.3213

Extruded Rubber Customer Service: 800.321.6357

Tremco CS&W Website: [www.tremcosealants.com](http://www.tremcosealants.com)

Your local Tremco Sales Representative: Use the Rep Locator on our website  
to find a sales representative near you:  
[www.tremcosealants.com/distributorrep-locator.aspx](http://www.tremcosealants.com/distributorrep-locator.aspx)

## IV. GUIDE FOR WORKMANSHIP

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### A. SURFACE PREPARATION

All components receiving the structural glazing silicone sealant (i.e., aluminum and glass) shall be thoroughly wiped with a clean lint-free cloth dampened with a recommended cleaner, as approved by Tremco and immediately followed by a dry wipe (2-rag method). Use a clean cloth for the dry wipe. Special precautions must be taken in cold weather to ensure surfaces are free from frost and/or condensation. For factory glazing, both the glass and framing should be stored indoors in a controlled environment for 24 hours prior to glazing. This will prevent the formation of frost and/or condensation that may occur if cold materials are brought into a warm area.

All surfaces once cleaned and/or primed should be handled carefully so as not to contaminate the surfaces.

### B. FRAMING

All framing shall be checked prior to glazing to make certain that the opening is square, plumb, and secure in order that uniform sealant bite, face and edge clearances are maintained. Inspect all butt and miter joints. If these joints are open, they shall be sealed prior to glazing using a sealant confirmed to be compatible with the structural silicone sealant. Maintain minimum edge clearances between glass and sash, as outlined by the glass manufacturer, and sealant contact depth (sealant bite) as recommended by Tremco for this specific project.

### C. SETTING BLOCKS

Setting blocks shall be used, as required, to support the glass/I.G. unit in structural glazing applications. The use of setting blocks will prevent the addition of stress applied on the structural tensile bead due to the dead load of the glass/I.G. unit. Setting blocks should be of a 80+/- 5 Shore A Durometer hardness in order to support the dead load of the glass/I.G. unit.

Locate setting blocks on the sill member as recommended by the glass manufacturer. When the sill section is structurally glazed (for both 2-sided and 4-sided systems), setting blocks shall be recessed to allow for adequate sealant contact (weatherseal) and glass support. When using insulating glass in a structural glazing application, the industry generally agrees that setting blocks should be recessed 50% of the thickness of the outboard lite of glass. The I.G. unit sealant supplier in conjunction with the structural sealant supplier shall confirm the polymer type of setting blocks that are compatible and can be used in the structural glazing application.

### D. STRUCTURAL SPACERS

Structural spacers used in this application must be compatible with the structural silicone sealant and positioned on the frame to ensure correct sealant contact depth as recommended and specified by Tremco. The silicone compatible spacers shall be of the required hardness to maintain a recommended uniform face clearance for all glass sizes.

The sealant cavity created by the installation of the structural spacer should be located in plane with the nozzle of the gun allowing direct entry of the sealant into the cavity. Out-of-plane or indirect access of the sealant to the cavity should be avoided.

## E. DETAIL DRAWINGS

Full sized details of the structural glazing pocket(s) showing the metal system(s) must be submitted to Tremco for review prior to the beginning of the project. Placement of materials must be shown on the details. If framing from the fabricator differs from the submitted details, the principal parties must resolve differences before proceeding further with the project.

## F. PRE-INSTALLATION MEETING

All materials shall be used in accordance with Tremco's printed instructions. A meeting to review procedures, tests required and sealant application should be held during bid stage and prior to the beginning of the work on the project. A Tremco representative should be present at the start of each job to review procedures and instruct in sealant application.

## G. ADHESION TESTING

Proper adhesion of the sealant to the substrate must be achieved prior to movement of the units to storage. Proper adhesion is achieved when the adhesion test results in cohesive separation of the sealant.

Units can then be moved to the job site after proper sealant adhesion is verified. This is typically done within 24 hours after fabrication. Units should be packaged for shipment in a fashion that will prevent additional stress on the sealant substrate bondline.

Adhesion tests must be performed by the contractor at the beginning and during the project application. A logbook recording all tests and verifications must be kept by the contractor as it will be used for contractor control (refer to Sealant Quality Assurance Programs in Sections VII and VIII of this guide). These documents should be submitted for warranty administration. A warranty cannot be issued without this information.



## V. GUIDE FOR SEALANT APPLICATION

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It is essential that Tremco Structural Glazing Sealants are installed in accordance with Tremco's recommendations and specific written instructions. Proper surface preparation is extremely important to the longevity and performance of Tremco structural silicone sealants. Substrate samples tested must be actual production run samples and must be representative of the materials to be used on the job site.

### A. CLEANING

1. Isopropyl alcohol (IPA) is the recommended solvent for cleaning metal and glass intended for structural glazing applications.
2. The solvent acts as a degreaser to remove the cutting oils and other contaminants used in the fabrication of the framing system. The solvent must be clean and fresh and must comply with local occupational safety codes. When used indoors, such as in a factory environment, proper ventilation must be provided.
3. Cloths used for cleaning of all framing members should be white, lint free and resistant to the recommended solvent. Do not use chemically treated rags. Do not hesitate to change the cloths frequently as they will become soiled during the cleaning operation. It is easy to see the soiling if white rags are used.
4. Pour the approved solvent onto a clean, dry cloth. Do not place cleaning cloth into the solvent solution container. This prevents solvent contamination, which can lead to a sealant adhesion problem. Vigorously rub the glass and metal surfaces to remove the contaminants. Continuously rotate the cloth, lifting off the oils loosened by the solvent.
5. Do not allow the solvent to air dry during the cleaning procedure. After the solvent wipe, follow immediately with another clean dry cloth to wipe the surface dry (2-rag method). Allowing the solvent to dry on the surface without wiping with a second cloth negates the entire cleaning procedure because the contaminants are redeposited as the solvent dries.
6. When cleaning deep, narrow joints, wrap the cleaning cloth around a clean, narrow-blade putty knife. This permits force to be applied to the surface to be cleaned.
7. Clean only as much area as can be sealed in 1 hour. If cleaned areas are exposed to contaminants (oils, dirt, dust, etc.), the surface must be cleaned again.
8. Keep solvent containers closed when not in use. Temperature and humidity will affect the evaporation rate of the applied solvent therefore affecting its cleaning power.
9. Caution:
  - a. Never use a paintbrush for the cleaning procedure. It is not effective in removing the contaminants off the surface. The rubbing action of the cloth is critical and essential for loosening up the contaminants from the substrate.
  - b. Some "cutting oils" used in the fabrication process may not be soluble in IPA. This should be verified before commencing the project.
  - c. For porous substrates, contact Tremco for appropriate cleaning surface preparation.

## B. PRIMING

1. Primer, when properly used, will promote strong and consistent adhesion of the silicone sealant to the substrates to which it may otherwise be difficult to bond. If a primer is required, it will be confirmed during the adhesion test executed prior to the beginning of the work.
2. Tremco offers TREMprime Silicone Metal Primer for most metal finishes. This primer is non-film-forming and moisture sensitive. This sensitivity to water may result in cloudiness or development of white precipitates (settling) in the container. Should either of these conditions exist, the primer should be discarded.
3. Always pour TREMprime Silicone Metal Primer onto a clean applicator. Never place the applicator into the primer container.
4. Apply a thin film of TREMprime Silicone Metal Primer using a clean lint-free cloth. DO NOT use a brush for application. Excessive application may result in a white powdery deposit, which must be removed before sealant application. This white deposit can be removed with a clean cloth dampened with the recommended cleaner. Reapply a fresh, lighter application of primer. A light application on a non-porous surface may best be accomplished by application with a clean, non-treated cloth or tissue dampened with primer.
5. Caution: Primers are not to be substituted for good surface preparation. The substrate to receive the primer shall be thoroughly cleaned using the recommended cleaner, and dried, prior to the installation of the primer.
6. Allow the primer to dry for a minimum of 15 minutes before sealant application. Protection of the primed area from contaminants is essential to ensure proper adhesion. If the primed area can not be kept clean, the primer is to be removed using the cleaning techniques described earlier and the area re-primed.  
  
If the primed area can not be covered within 1 hour, it must be removed with a clean cloth dampened with the recommended cleaner and the area reprimed.
7. Please refer to the Tremco Primer Selection & Usage Guide for further information on TREMprime Silicone Metal Primer. Please make sure the primer has not expired.

## C. MASKING

1. To provide a neat sealant sight line, masking tape is commonly used to outline the joint to be sealed. This reduces sealant smears, which are often found aesthetically unacceptable.
2. When masking is required, the tape must be immediately removed after the tooling has taken place and before the cure of the sealant begins.

## D. SEALANT APPLICATION

1. The structural silicone sealant shall be installed according to Tremco's specific job installation recommendations. All surfaces must be properly cleaned and/or primed before sealant application.
2. The surfaces to which the silicone sealant will adhere should be designed smooth: free of nubs, serrations, grooves or other features, so as to not impede the flow of the silicone sealant or wetting of the sealant to the substrates on its entire surface contact depth.
3. Compatible structural spacers shall be installed to keep the glass properly spaced as per the approved drawings. Refer to the approved structural glazing detail for the configuration of the sealant and the placement of the spacer. Face clearance created by the structural spacer should be a minimum of 1/4" wide to accommodate penetration of the sealant to the full depth of the cavity.
4. Prime surfaces as advised by Tremco, taking care to protect the surfaces that do not require primer. If primer is applied accidentally on surfaces other than the one specified, it should be removed immediately with the help of a clean cloth dampened with the recommended cleaner.
5. When gunning the silicone sealant into the cavity created by the structural spacer between the glass and the metal, a back pressure should be created such that the silicone sealant swells up behind the nozzle tip above the sight line, promoting full depth penetration of the sealant. Air pockets or voids along the edges are not acceptable and should be reported to the job foreman for immediate repairs.
6. All sealant beads must be tooled immediately after application, forcing the sealant into contact with the sides of the joint, promoting a full and continuous contact of the sealant with both substrates. This reduces the risk of air entrapment within the tensile bead. Avoid pulling the sealant out of the joint by frequent cleaning of the tooling instrument. Dry tooling is the recommended tooling method. Do not tool with soap, solvents, or detergent solutions. Tooling time for Proglaze SSG is equal to the skin time value as published in the data sheet.
7. Areas that have been smeared or otherwise contaminated with unwanted silicone sealant should be cleaned before the sealant has an opportunity to cure. This is best accomplished with an IPA solvent-soaked cloth followed by a dry rag wipe. Failure to do so immediately can lead to very costly removal methods later on.
8. Follow Tremco's recommendations regarding curing periods and transport time for factory and field sealant applications. These recommendations can vary from job to job.
9. Use structural silicone sealants within their stated shelf life. Verify the batch numbers and expiration dates of both the curative and base components of the silicone sealant upon receipt. Store in a dry environment 60 to 80 °F (15 to 27 °C).

Notes: All cleaners or primers to be used on the structural glazing application should be poured from the original container into small containers and poured from this vessel onto the cleaning cloth to prevent contamination of dirt into the container. Pour off only enough primer required for immediate use. Should the cleaner or primer become contaminated with dirt, discontinue use and obtain fresh primer. Follow the manufacturer's safety recommendations for solvent and primer use.

## VI. GUIDE FOR ADHESION CHECK

During the course of the sealant installation for this project, testing of sealant adhesion to the substrate should be performed on a continuing basis. Tremco recommends a field adhesion check at a minimum rate of one per every 50 units glazed. Actual job site test applications are the best means for a glazier to perform a quality assurance check. This provides the installer with a level of confidence that the sealant and established application procedures are in compliance to Tremco's written instructions. Two adhesion test methods are available: The tab adhesion and the hand pull tests.

### A. THE TAB ADHESION TEST METHOD

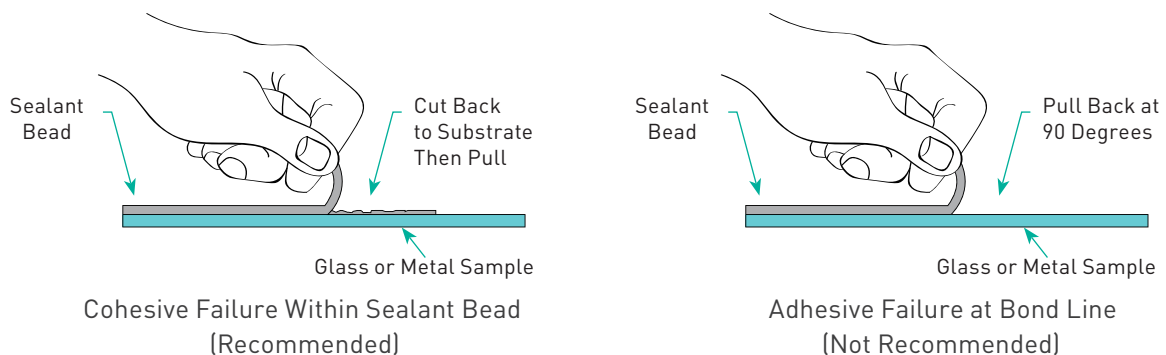
When construction design permits, this method is performed at the time of sealant installation. For a tab adhesion/pull test, a location on the framing assembly must be available that is accessible but will not be exposed on completion of the work, as this method will permanently deface the area of test.

This adhesion/pull test is performed as follows:

1. The on-site "tab" sample is to be applied based on Tremco's recommendation for this specific project including appropriate cleaners and primers. The "tab" sample consists of a single 3/8" (9 mm) diameter bead of sealant that is tooled to a thickness of 1/4" (6 mm).
2. After the cure period, take a razor blade and under cut one end of the tab, exposing a "flap" that can be grasped with fingers.
3. Pull this "flap" at approximately 90° angle. Cohesive failure of tab is the desired result.

This method takes advantage of not disturbing the original structural sealant after its installation and subsequent repairing of the sealant.

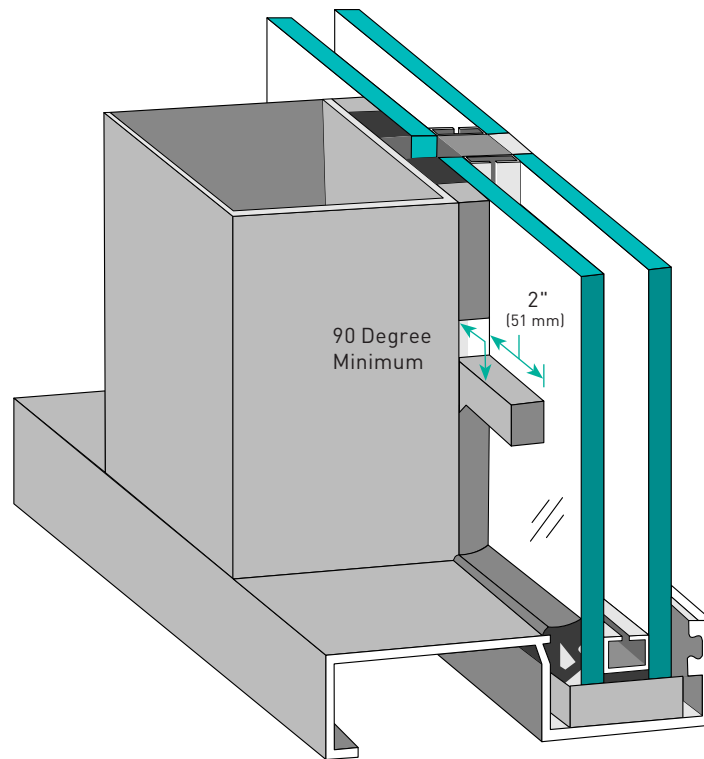
## Adhesion Test Procedure



## B. THE HAND PULL ADHESION TEST METHOD

This most popular test method is performed on the sealant installation after an appropriate sealant cure time period as approved by Tremco to ensure proper adhesion development. For Proglaze II the cure time should be 3 to 7 days at 77 °F (25 °C) and 50% RH. For Proglaze SSG and Spectrem 2 the cure time should be 14 to 21 days at 77° F (25° C) and 50% RH. This hand pull test procedure is performed as follows:

1. With a sharp knife, cut the sealant horizontally from one side of the joint to the other. Caution: Care should be taken not to damage painted metal finish.
2. Make two vertical cuts approximately 2" (51 mm) long at the sides of the joint, meeting the horizontal cut at the top of the 2" (51 mm) cuts.
3. Grasp the 2" (51 mm) piece of sealant firmly between the fingers and pull down at a 90° angle or more, and try to pull the uncut sealant out of the joint.
4. If adhesion is proper, the sealant should tear cohesively within itself before releasing from the substrate.
5. If sealant does not tear cohesively, contact Tremco Technical Services to assist in determining the cause of poor adhesion results.



## C. REPAIR OF SEALANT IN ADHESION TEST AREA

The test sealant may be repaired (test area) by simply applying more sealant in the same manner it was originally installed (assuming good adhesion was obtained). Care should be taken that the new sealant is in contact with the original and that the original sealant surfaces are clean so that good bond between the new and old sealant will be obtained. Check with Tremco Technical Services for proper repair techniques.

## VII. ONE-PART SILICONE SEALANT – QUALITY ASSURANCE PROGRAM

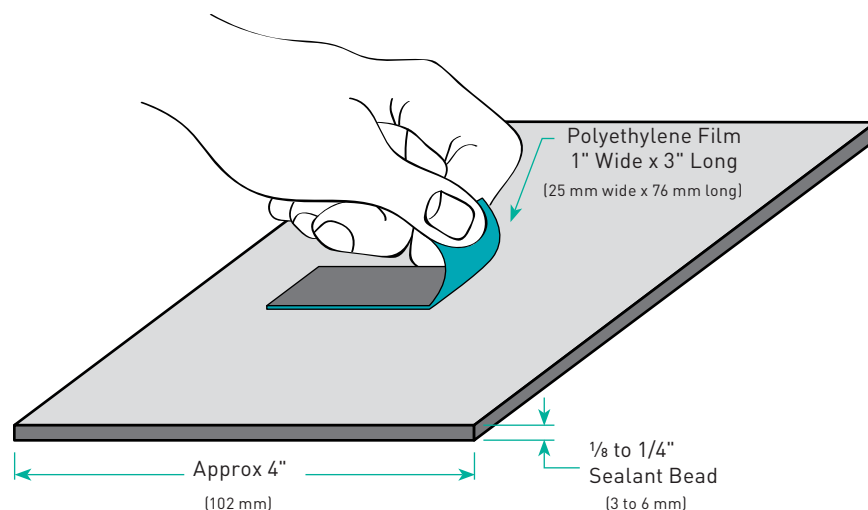
### PROGLAZE SSG AND SPECTREM 2

Successful use of Tremco Proglaze SSG and Spectrem 2, one-part silicone sealants, includes proper record keeping. When Proglaze SSG or Spectrem 2 is selected for use in a structural glazing application, the following is recommended:

1. All containers should be stored below 80 °F [27 °C].
2. All incoming batches/lots should be recorded and tested within 30 days after receipt of material per attached methods.
3. All results must be recorded and maintained in the appropriate logbook.

#### A. TEST #1 - TACK FREE TIME

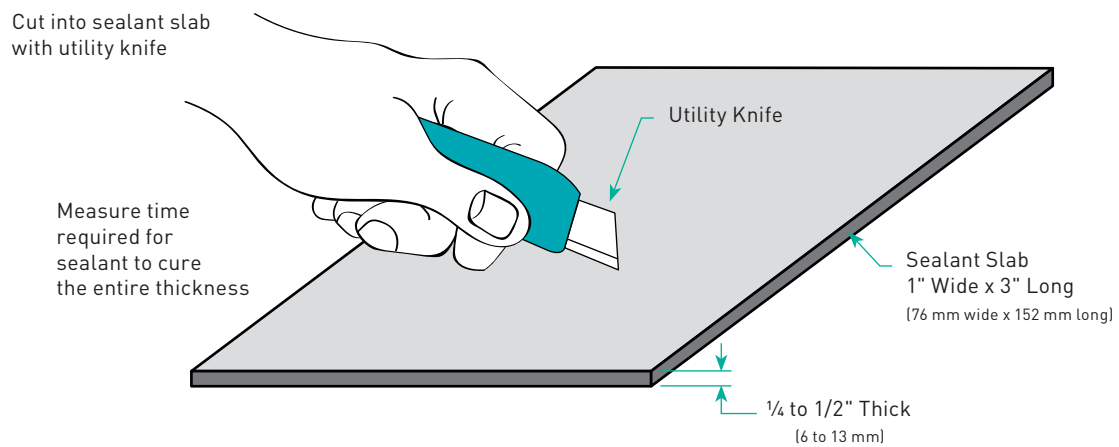
1. Apply a bead of sealant 1/8" to 1/4" thick (3 mm to 6 mm) onto a sound substrate. Strike off sealant to ensure consistent thickness. Immediately record the date and start time in the logbook.
2. Obtain a 1" x 3" piece (25 mm x 75 mm) of low-density polyethylene film 0.15 to 0.20 mm thick (6 to 8 mils). Install the polyethylene sheet on the sealant and maintain slight pressure with your finger to ensure contact between the two for about 5 seconds.
3. Withdraw the film progressively at a 90° angle to the surface. Repeat every 15 minutes until the sealant does not stick to the polyethylene film. Record in the logbook the time at which the sealant does not stick to the film.
4. The difference in these times will provide the tack-free time of the sealant.
5. If tack-free time exceeds 2 hours, contact Tremco Technical Services. The tack-free time value will vary depending on the local atmospheric conditions present during the curing of the sealant.



## Tack Free Time Test

## B. TEST #2 - THROUGH CURE TEST

1. Apply a bead of sealant about 1/4" thick (6 mm) onto a sound substrate. Strike off the sealant to ensure consistent thickness. Immediately record the date and start time in the logbook.
2. Allow the sample to cure 24 hours. Cut into the sealant using a utility knife.
3. Measure the thickness of sealant cured at this time. Every 24 hours, verify the amount of cured sealant until the sealant is cured through and no uncured material is visible at the center of the bead.
4. Record total number of days for cure in the logbook. The number of days required for the sealant to cure will vary depending of the thickness of the sealant and the local atmospheric conditions.



## Through Cure Test

C. ONE-PART QUALITY CHECK – LOGBOOK

TEST #1  
Tack-Free Time

TEST #2  
Through Cure

DATE	SEALANT THICKNESS	BATCH #	START TIME	END TIME	TACK FREE TIME [MIN]	24-HOUR CURE [IN. OR MM]	DAYS TO FULL CURE	TEMPERATURE & RELATIVE HUMIDITY [RH]	OPERATOR SIGNATURE



## VIII. GUIDE FOR REGLAZING

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The design professional, when designing structural glazing systems, should address glass replacement needs and accessibility.

Glass replacement must allow for proper glass support, bite, edge clearances and tensile bead sealant dimensions. Tremco Technical Services must be involved in this investigation and in subsequent replacement/reglazing procedures. The reglazing procedures will incorporate temporary retainers for holding the glass in place while the replacement sealant cures.

There are basically two types of replacement failures:

1. Glass Failures
2. Sealant Failures
  - a. Adhesive
  - b. Cohesive

After a thorough investigation to determine the cause of failure to the satisfaction of all parties involved, reglazing should commence immediately.

## A. GLASS FAILURES

For the replacement of glass due to failures such as broken glass or a failed I.G. unit, proceed as follows:

1. Remove existing glass by cutting the tensile bead and weatherseal. The sealant adhering to metal (tensile bead) and glass (weatherseal) may be removed with an utility knife or a razor blade. A small portion of the sealant is to remain adhered to the metal [approximately 1/16" [1.6 mm]]. Caution: All loose sealant or shavings must be removed.
2. Before setting new glass, wipe the remaining tensile bead with IPA (Isopropyl Alcohol) using the 2-rag wipe method. Reinstall all compatible spacers and setting blocks.
3. Set the glass and install temporary retainers as required. The opening is now ready to be resealed.
4. Mask the joint, install the new silicone sealant, and tool; then remove the masking.
5. Allow the replacement sealant to cure following Tremco's recommendations; then remove retainers sealing the retainer voids with the silicone sealant.

Note: The replacement silicone sealant shall be approved by Tremco prior to the beginning of the work.

## B. SEALANT FAILURES

Tremco shall be notified of any sealant failures in a structural glazing project. A thorough review of the total glazing system is required to determine the reasons/causes for the failure. Once Tremco has investigated the matter, a Tremco Technical Services Representative will establish specific reglazing procedures to be followed.

Some general questions to be addressed prior to the repairs of the job:

1. What cleaners/primers are to be used?
2. How long should the replacement silicone cure before removing the retainers?
3. Is there room for attachment of the temporary retainers?
4. Is the replacement sealant bead (tensile bead) adequate for load requirements?
5. Are replacement spacers and setting blocks compatible?
6. Is the replacement silicone the same as original?
6. Did Tremco provide adhesion and compatibility testing for substrates for this project?

Resolving these and other questions as they arise will lead to successful replacement and continued service.

# X. APPENDIX

## A. STRUCTURAL GLAZING TESTING INITIATION FORM

Project Name and Location: \_\_\_\_\_

Sales Rep: \_\_\_\_\_

Customer Name: \_\_\_\_\_

Wind Load: \_\_\_\_\_

Company Name: \_\_\_\_\_

Company Address: \_\_\_\_\_

Circle all that apply.

Structural Glazing Type:

1 sided

2 sided

3 sided

4 sided

Sloped glazing

Structural Sealants to test:

Spectrem 2, Proglaze SSG

Check all that apply.

Submitted Metal for Testing:

Metal Finish:

Anodized

Alodineo Paint:

Manufacturer: \_\_\_\_\_

Paint Color: \_\_\_\_\_

Paint Code: \_\_\_\_\_

If more than 1 paint is required please include information in additional comments section\*

Check all that apply.

Glass: Manufacturer \_\_\_\_\_

Type:

Monolithic

Laminated

Insulated

Coatings:

Manufacturer: \_\_\_\_\_

Coating Name: \_\_\_\_\_

Coating Color: \_\_\_\_\_

Check all that apply.

Accessories:

Rubber Type:

Spacers Manufacturers: \_\_\_\_\_

Silicone

EPDM

SCR

Other

Gasket Manufacturers: \_\_\_\_\_

Silicone

EPDM

SCR

Other

Setting Block Manufacturers: \_\_\_\_\_

Silicone

EPDM

SCR

Other

Check all that apply.

Test Procedures:

Tab adhesion (ASTM 1193 Appendix)

ASTM C794 Adhesion-in-Peel

ASTM C1248 Stain Testing (Optional)

ASTM C1087 Compatibility For:  Accessories

Glass Coatings

Check all that apply.

Primers:

TREMPprime Silicone Metal Primer

TREMPprime Silicone Porous Primer

Sample Sizes and Requirements:

Tab adhesion – metal requirements: one sample of 4"x6"  
(10 cm x 15 cm) project specific metal per sealant

ASTM C794 – metal requirements: square flat metal, 4 samples of  
4"x6" (10 cm x 15 cm) project specific metal per sealant

ASTM C1087 – accessories: three 3" sample of each; glass: three  
12" x 12" (30 cm x 30 cm) samples

Send Samples to:

Charlotte Guerrero

Tremco Inc.

3777 Green Road  
Beachwood, OH 44122

Additional Comments: \_\_\_\_\_  
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## X. APPENDIX

### B. DEGLAZE TEST LOG

Sealant Adhesion and Cure Quality Control Log (Deglaze Test)	
Company Name & Location:	
Project Name & Location:	
Dispensing Pump Type & Location:	
Frame Description:	Cleaning Solvent:
Primer:	Primer Lot Number:
Base Lot Number:	Curing Agent Lot Number:
Glass Description:	Frame Number:
Sealant Application Date:	Deglaze Test Date:

Results and Observations:

Measured SG Bite (Glass):

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Measured SG Bite (Frame):

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Measured Glueline Thickness:

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Joint Fill:

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Sealant Mix:

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Air Entrapment or Bubbles:

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Sealant Adhesion to Frame:

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Sealant Adhesion to Glass or Panel:

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Sealant Cure Uniformity:

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Other Observations:

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## X. APPENDIX

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### C. TECHNICAL SERVICE BULLETIN NO. S-08-47

#### LAB TESTING REQUIREMENTS

In order to effectively execute project testing requests in a timely manner, we are establishing the following sample size requirements. Estimated test completion times, which include report generation, are also included. Testing will commence upon receipt of all pertinent project samples and completed laboratory test form.

1. Tab Adhesion: A bead of sealant is applied to the clean substrate, primed and unprimed. After curing for 14 days, a dry pull is done and the substrate is immersed in water for 7 days. A wet pull is done and findings are reported. A 4" x 6" x ¼" (10 cm x 15 cm x 6 mm) sample for each sealant is recommended; however, a sample that is representative of the job is acceptable. For structural glazing applications, a sample that is representative of the job is required. Estimated completion time – 4 weeks.
2. ASTM C794 Adhesion-in-Peel testing: Four pieces of wire mesh are embedded in the sealant on the substrate, primed and unprimed. The samples are allowed to cure at room temperature for 7 days, placed in the 158 °F (70 °C) oven for 7 days, back at room temperature for 7 days, and immersed in water for 7 days. The samples are then pulled on the Instron to get the average peel (pli) strength and the % Cohesive or Adhesive Failure. Four 4" x 6" (10 cm x 15 cm) flat samples for each sealant are required. Estimated completion time – 5 weeks.
3. ASTM C1087 Compatibility testing: A 1 to 2" (25 to 51 mm) piece of accessory is placed on a piece of glass and half is covered with the test sealant and the other half with a reference sealant. They are allowed to cure at room temperature for 7 days and then placed in the UV box for 21 days. The findings are then reported – Staining of sealant, adhesion to glass, adhesion to accessory, and any other observations. Three 3" (8 cm) long gaskets or accessories are required for each sealant. Estimated completion time – 5 weeks.
4. [OPTIONAL] ASTM C1248 Stain testing: Twelve H-beads are made and filled with sealant and allowed to cure for 21 days at room temperature. Three assemblies of 4 H-beads under compression are created. One assembly is placed at room temperature, one in the UV box, and one in the 158 °F (70 °C) oven for 14 days. Two H-beads from each assembly are removed and broken with a mallet to check for staining. The remaining H-beads are removed and broken after an additional 14 days. A 12" x 12" x 1" (30 cm x 30 cm x 25 mm) sample for each sealant is required. Estimated completion time – 2 months.

When completed, the test reports will be issued to the pertinent sales representative.  
The representatives are to issue the cover page summary to the customer.

[Charlotte Guerrero](#)  
Technical Services  
Tremco Commercial Sealants & Waterproofing Division

Please contact Tremco Technical Services at 866-209-2404 with any questions regarding this bulletin.