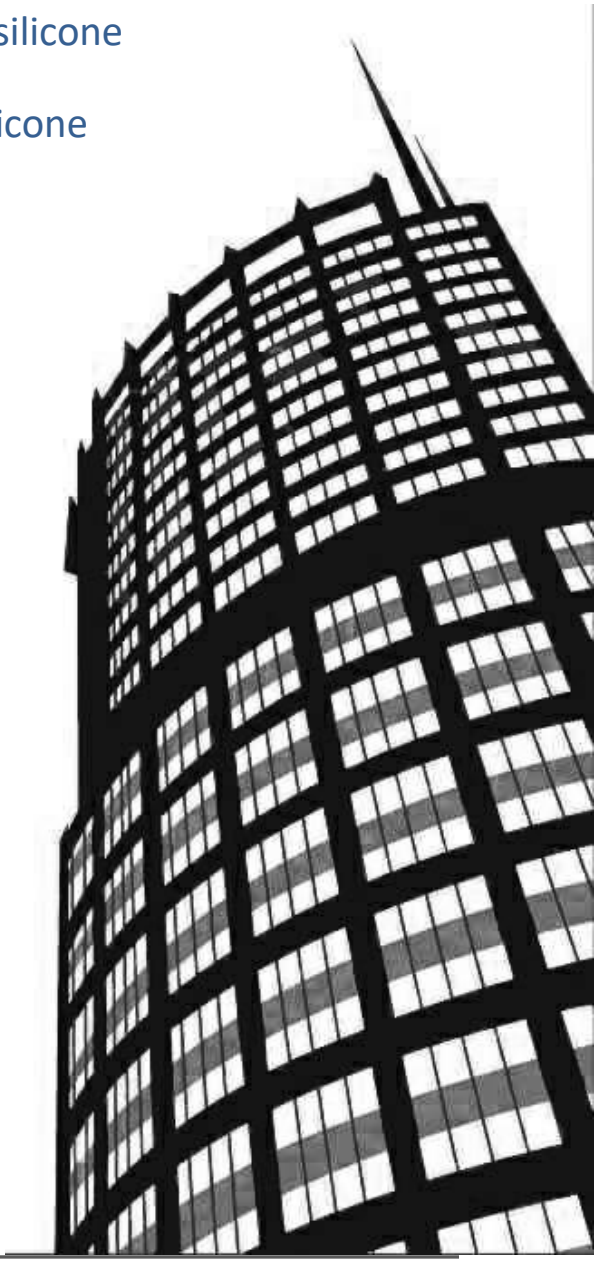
Field Reglazing

Information for use with

GE UltraGlaze* structural silicone

GE SilPruf* structural silicone



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FIELD GLAZING/REGLAZING OPERATIONS

The following information addresses the procedures and topics pertaining to installation of structurally glazed assemblies for field situations.

REFERENCES

Other documents to be used in combination with this procedure:

- ASTM C1401 - Standard Guide for Structural Sealant Glazing *
- Momentive project-specific Adhesion & Compatibility test reports
- Momentive - Batch code, Shelf life & Storage Information
- Product datasheet - UltraGlaze SSG4600 2-part structural adhesive
- Product datasheet - UltraGlaze SSG4400 2-part structural adhesive
- Product datasheet - UltraGlaze SSG4000 1-part structural adhesive
- Product datasheet - UltraGlaze SSG4000AC 1-part structural adhesive
- Product datasheet - SilPruf SCS2000 1-part structural adhesive & sealant
- Product datasheet(s) - SS4179, SS4044P or SS4004P primers
- Supermix information document (for use with 2-part cartridges)
- Manufacturer's Safety Datasheets (MSDS) for cleaning solvents used

*NOTE: It is recommended that the reader obtain and read the ASTM C1401 Guide for Structural Glazing. This document provides a state-of-the-art overview of Structural Glazing. Copies may be obtained from www.astm.org.

STRUCTURAL SILICONE

Verify that all received silicone is the correct product that was tested for the specific project. The Batch code and Use before date must be recorded for all received silicone. This information must be retained and provided to Momentive, as it will be required before issuance of a project warranty, if requested. Before using any product, check Use before date to assure that expired product is not being used. Never used expired material. Store all received silicone according to the prescribed storage conditions for each product. Any silicone not stored accordingly will nullify a project warranty.

SILICONE PRIMER (ADHESION PROMOTER)

Verify that all received primer (if needed, as determined by adhesion testing) is the correct primer that was tested for the specific project. The Batch code must be recorded for all received primer. This information must be retained and provided to Momentive, as it will be required before issuance of a project warranty, if requested. Before using any primer, check the Batch code against the reference document to assure that expired primer is not being used. Never use expired material. Store all received primer according to the prescribed storage conditions. Primer not stored accordingly may spoil and can cause adhesion problems.

REFERENCE DOCUMENT: Batch code, Shelf life & Storage Information.

CLEANING SOLVENT

Solvent must be verified as being the type recommended and tested by Momentive for the specific project, see project-specific Adhesion & Compatibility test reports. The substrate supplier or manufacturer should also be contacted to confirm compatibility with their product.

CAUTION

STRUCTURAL SILICONE MAY NOT ADHERE AND/OR MAINTAIN THE INTENDED LONG-TERM ADHESION TO SUBSTRATES IF THE SURFACES ARE NOT PREPARED AND CLEANED PROPERLY PRIOR TO PRODUCT APPLICATION. USING PROPER MATERIALS AND FOLLOWING PRESCRIBED SURFACE PREPARATION AND CLEANING PROCEDURES IS VITAL FOR DURABLE ADHESION.

1. **Deglazing - For removal of damaged glass:**

- When applicable, remove or cut the internal gasket/tape around the perimeter of the unit.
- Make a cut through the structural silicone at the perimeter of the unit, leaving:

OPTION 1

- A 'razor thin' residue of silicone on the substrate (see photo below).
  - ➔ In this case, primer must never be used (using primer on cured silicone residue can interfere with adhesion).

Or

OPTION 2

- Alternately, remove ALL existing structural silicone, restoring the virgin substrate surface, using caution not to damage the substrate finish in any manner that could potentially interfere with the adhesion performance of the fresh structural silicone. This removal can be accomplished in a variety of ways, but commonly by cutting away the majority of the existing silicone with a flat razor then removing the remaining silicone residue using synthetic abrasive pads (such as 3M kitchen sponge type pads) with solvent (IPA).
  - ➔ In this case, it must be determined if the silicone to be used for reglazing requires primer on the particular finish. If in doubt, consult Momentive Technical Services for information on how to proceed.

- Remove the damaged glass (typically using a group of suction cups or similar method).
- Confirm that there are no disturbances on the mullion that could potentially interfere with the adhesion performance of the structural silicone.

2. Reglazing - For replacement of new glass:

- Place any new glazing accessories in their proper position (setting blocks, gaskets, etc.)

- When cleaning original substrates (i.e., paint, anodized, etc…) , use a dual-rag wipe procedure.

** Dual-Rag Wipe Cleaning Procedure consists of a wet rag dampened with Isopropyl Alcohol (IPA) which is used to wipe clean the surface(s) to be sealed, after which a second clean white rag is immediately used to wipe the wet solvent from the surface before it evaporates. Do not allow solvent (IPA) from the wet rag to evaporate before re-wiping the surfaces just cleaned with the second, dry rag as this would lead to recontamination of the surfaces.

- When cleaning newly exposed silicone razor thin surface(s), use IPA and clean, lint-free rags of material approved by Momentive. A quick wipe will suffice and is intended to remove any dust that may have accumulated since time of deglaze. The rags should be sufficiently damp with solvent but not dripping wet as this could allow excess solvent to remain on the sealant. Change the rags frequently as they accumulate dirt/dust, etc.

- Clean the replacement glass surface that are to be in contact with the structural silicone using clean, lint-free rags of material approved by Momentive, dampened with IPA (Isopropyl Alcohol). Change the rags frequently as they accumulate dirt/dust, etc.

- When applicable, protect any exposed surfaces, which are in close proximity to the structural joint, such that excess sealant applied during the re-glaze operation may be easily removed. Masking tape (or similar), when used, helps to maintain a neat reinstall.

- When necessary, apply GE silicone primer (reference Momentive adhesion test reports for specific primer type) using a rag in a thin film onto the aluminum. Glass surfaces do not require primer. See also primer datasheet guidelines.

- Position the glass or panel into the frame and apply sufficient pressure to keep the glass in contact with the gasket (or tape). Maintain this pressure, by use of temporary mechanical anchorage (clamps, fasteners, clips) or exterior covers, etc…until the structural sealant has reached FULL cure. The temporary mechanical anchorage must retain the glazing, without movement, until full cure of the silicone adhesive has been attained.

- It is the installer's obligation to assure that sufficient cure and acceptable adhesion of the silicone has been attained before removing the temporary supports. The best way to assure adhesion and cure stage is to create small sample assemblies, simulating the installed joint configuration, which are cured at the job site and used as a model to check for full cure. Several will be required as each check is a destructive break down of the assembled section to check for cure status of the silicone. See Momentive information document for Deglazing Sample Assemblies.

- Time to sufficient cure will vary by project location, joint configuration, structural bead size, type of silicone, and current ambient conditions, among other things, but several days is an required for most joint sizes when using single-component sealant and a minimum of 24 to 48 when utilizing dual-component sealants Contact Momentive technical services for assistance in cure time estimation.

- Assure that the silicone and primer (if needed) to be used is fresh; check expiration date. Never used expired material.

- Apply the structural silicone around the perimeter of the frame and in sufficient amount such that no permanent voids or air pockets exist in the glazing pocket. DO NOT PROCEED UNTIL YOU HAVE CONTACTED MOMENTIVE TECHNICAL SERVICES TO DETERMINE THE CORRECT PRODUCT FOR USE WHEN REGLAZING.

- Tool the structural silicone to ensure that the cavity is completely filled and with sufficient pressure such that the contact surfaces are fully 'wetted' with the structural silicone.

NOTE: Use caution when applying structural silicone in a field glazing operation when ambient conditions are below 40˚F (4.4˚C) as frost and/or condensation on the substrates can occur. Frost and moisture will interfere with adhesive bonding.

SEALANT CHECK

Prior to use, double check batch code information to assure material is not beyond Use before date. For one-part sealants, a skin time and cure test should be performed on each batch of sealant used. The purpose of the test is to check the sealant's skin time and to confirm that full cure of the sealant is attained. Any significant variation (excessively long times) in the skin-over time may indicate an out-of-shelf-life sealant.

This test is performed as follows:
a.) Spread sealant to 1 mm thickness on a sheet of polyethylene.
b.) Every few minutes, touch the sealant film lightly with a tool.

c.) When the sealant does not adhere to the tool, the sealant is skinned over. Note the time required to reach this point. If a skin has not formed within 3 hours, do not use this material and contact your technical representative.

d.) Allow the sealant to cure for 24 hours. After 24 hours, peel the sealant from the polyethylene sheet. Stretch the sealant slowly to confirm that it has cured. If the sealant is not elastomeric (i.e., returns to original shape upon release after stretching) or is otherwise suspect, do not use this material and contact your technical representative.

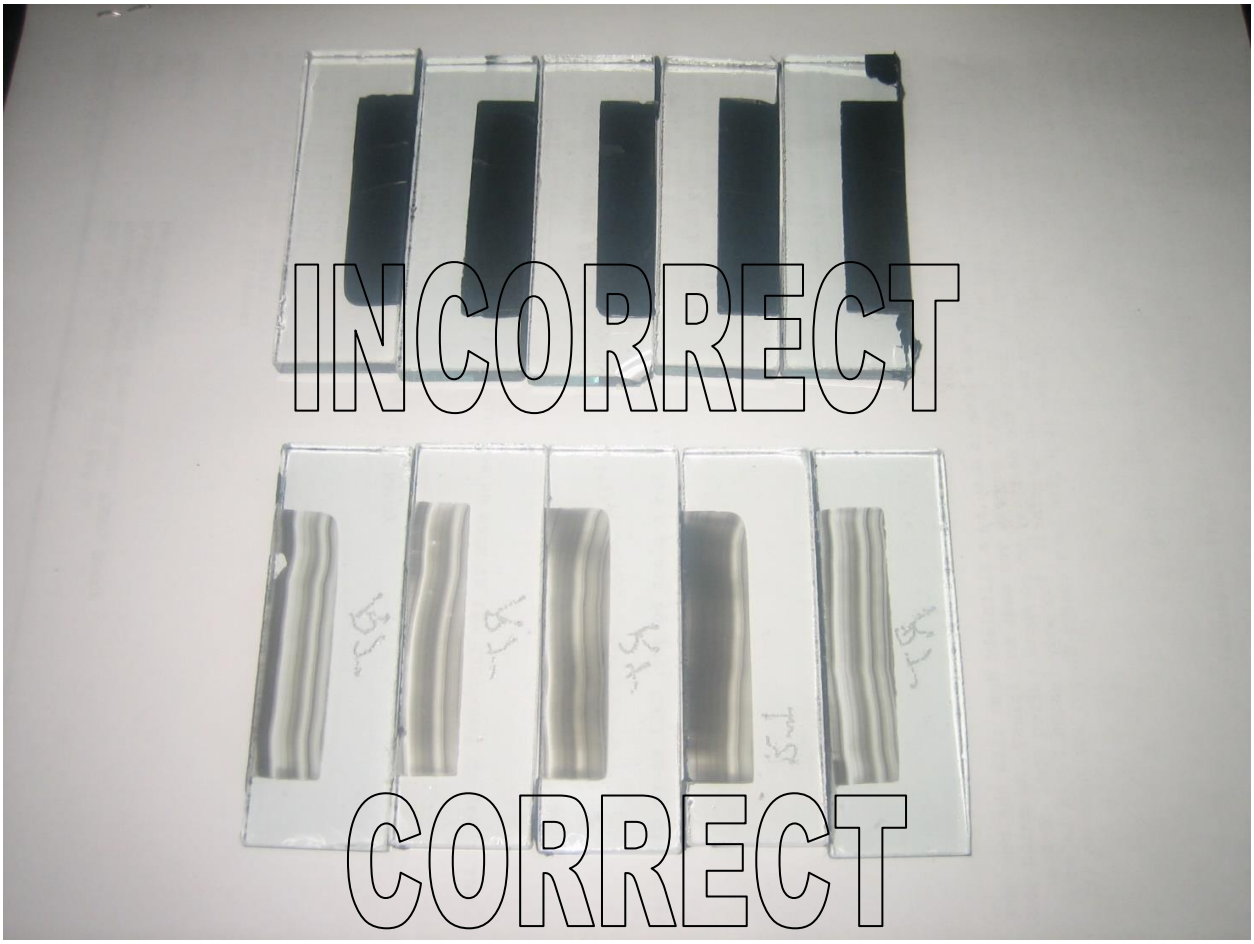
SURFACE PREPARATION & CLEANING PROCEDURES

Reference silicone product datasheets and Momentive project-specific adhesion test reports for specific cleaning, priming and application instructions.

PRODUCT DESCRIPTIONS

- UltraGlaze SSG4600 – 2 part Silicone Structural Glazing Adhesive
  SSG4600 in cartridges are denoted as
  SSG4603 CTG (black color)
  SSG4607 CTG (grey color)
- UltraGlaze SSG4400 – 2 part Silicone Structural Glazing Adhesive
  SSG4400 in cartridges are denoted as
  SSG4400 CTG (black color)
  SSG4710 CTG (grey color)
- UltraGlaze SSG4000 – 1 part Silicone Structural Glazing Adhesive
- UltraGlaze SSG4000AC – 1 part Silicone Structural Glazing Adhesive
- SilPruf SCS2000 – 1 part Silicone Structural Glazing Adhesive & Sealant
- SS4179 – clear primer
- SS4044P – clear (amber) primer
- SS4004P – tinted (pink) primer

NOTE: A slight precipitate may occasionally form in the SS4004P & SS4044P primers. This will not impair performance of the primer. Do not shake the container prior to use, but carefully decant the clear primer from the top of the container as needed.



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