The Dow Corning® Silicone Transition System is a flexible solution for sealing transitions from curtain wall, storefront and punched windows to the façade opening. It can be installed with inboard, outboard and in-plane designs, as Figures 15 through 23 illustrate.

The silicone strip may be installed in-shop or in the field, depending on the order of installation.

**In-Shop**

**Installation of Strip**

For in-shop installations, Dow Corning recommends attaching the strip to the mullion using Dow Corning® 791 Silicone Weatherproofing Sealant or Dow Corning® 795 Silicone Building Sealant. Other sealants (Dow Corning® 756 SMS Building Sealant, Dow Corning® 758 Silicone Weather Barrier Sealant or Dow Corning® 983 Structural Glazing Sealant) may be used, but generally Dow Corning 791 Silicone Weatherproofing Sealant and Dow Corning 795 Silicone Building Sealant are the products on hand. For best air infiltration results, Dow Corning recommends two strips of silicone be used for the attachment. Clean the mullion using the two-rag wipe method and solvent. Apply two parallel beads of sealant of ¼ inch to ⅜ inch in diameter to either the strip or the mullion, and then press the silicone strip to the mullion. The compressed bead width should be ½ inch or larger and can be visually checked by viewing through the translucent strip. It has been found that two beads help in eliminating any air infiltration through areas that may not be completely wetted out using hand pressure. A single bead of sealant may be used when there is not space for two beads and full contact can be ensured.

**Installation of Corners**

Corners may be installed in-shop. When shop-installed, the same two beads of sealant (or one ensuring full contact) would be applied using the techniques previously mentioned. Corners shall be installed such that reverse lapping once the unit is installed is avoided.

This is most easily accomplished by installing the sill corners first; then the vertical Dow Corning Silicone Transition System pieces will lie over the corners. The head corners can then be installed lapping over the vertical strip pieces, achieving the appropriate shingling. However, this order can be changed provided the appropriate pieces are laid over/under as needed to avoid reverse shingling.

Figure 1: Corner piece installed.
System Considerations
When installing the strip – and corners if applicable – it may be found that a mechanical fastener is desired to keep the strip in place through moving units in the shop. A screw can be used to punch through the strip, sealed over by installing a dollop of sealant over the screw head and mechanically tooling the sealant over the screw head. It is critical for air infiltration performance that any area in which a mechanical fastener is used be completely covered with sealant, and the sealant must be tooled over the fastener.

When the fenestration unit is taken to the field, the opposing edge of the strip and corner is attached to the building façade using the same two strips of sealant. If the edge is being attached to an air barrier, which would be expected, the sealant of choice for adhering this edge generally would be Dow Corning® 758 Silicone Weather Barrier Sealant because of its adhesive properties to low-energy surfaces such as polyethylene, a common material for the top sheet of peel-and-stick air barriers. Depending on the air barrier surface, other sealants may be used (please consult Dow Corning for guidance as needed at construction@dowcorning.com). Field adhesion testing by “tab adhesion” should be completed prior to installing the Dow Corning® Silicone Transition System (see Figure 3). Once the proper sealant has been identified, clean the air barrier surface using a solvent and gentle two-rag wipe so as not to burnish the surface of the air barrier. Apply two parallel beads of sealant of ¼ inch to ⅜ inch in diameter to the surface. Then press the silicone strip to the surface. The compressed bead width should be ½ inch or larger, and it can be visually checked by viewing through the translucent strip. It has been found that two beads help in eliminating any air infiltration through areas that may not be completely wetted out using hand pressure. If a roller is used and full contact can be guaranteed, a single bead of sealant may be used. For best air infiltration performance, it is recommended to install and tool sealant at every lap edge of the strip and every lap transition between pieces of the strip, or between strip and corners (Figure 4).

Peel-in-Adhesion Test Procedure (Tab Adhesion)
Another simple screening test can be done on a flat test surface. A test piece like that shown in Figure 3 is recommended.

1. Clean and prime the surface following the project-specific recommendations.
2. Place a piece of polyethylene sheet or bond breaker tape across the flat test surface.
3. Apply a bead of sealant and tool it to form a strip approximately 7.8 inches (200 mm) long, 1 inch (25 mm) wide and ⅛ inch (3 mm) thick. At least 2 inches (50 mm) of the sealant should be applied over the polyethylene sheet or bond breaker tape. After cure of the sealant, pull the sealant perpendicular to the substrate until failure occurs.

Figure 2: Corner and strip pieces installed in-shop.
Figure 3: Tab adhesion test procedure.
Field Installation

For field installation, the same guidelines apply, but the order of installation is reversed.

Installation of Strip

For field installations, Dow Corning recommends attaching the strip to the building surface (generally an air barrier) with Dow Corning 758 Silicone Weather Barrier Sealant. Depending on the air barrier surface, other sealants may be used (please consult Dow Corning for guidance as needed at construction@dowcorning.com). Field adhesion testing by “tab adhesion” should be completed prior to installing the Dow Corning Silicone Transition System (Figure 3). Once the proper sealant has been identified, clean the air barrier surface using a solvent and gentle two-rag wipe, so as not to burnish the surface of the air barrier. Apply two parallel beads of sealant of ¼ inch to ⅜ inch in diameter to the surface, and then press the silicone strip to the surface. The compressed bead width should be ½ inch or larger, and it can be visually checked by viewing through the translucent strip.

It has been found that two beads help in eliminating any air infiltration through areas that may not be completely wetted out using hand pressure. Provided full contact can be guaranteed, a single bead of sealant may be used. For best air infiltration performance, it is recommended to install and tool sealant at every lap edge of the strip and every lap transition between pieces of the strip, or between strip and corners (Figures 5 and 6). The remaining flap can be folded and kept out of the way of window installation by folding the flaps into the building and taping them down if needed.

When strip is hung vertically, it has been found that 10 feet to 15 feet can be hung in vertical runs, attached with sealant without slump. Longer runs may be possible but may require one mechanical fastener at the top to hold the strip in place (tool sealant over). It has been found that one floor at a time is generally more feasible for installation.

Figure 4: Sealant attaching strip and corner to air barrier in-field. Lap joints sealed.

Figures 5 and 6: Strip installed with sealant under strip and over lap joint.
Openings also may be “wrapped” with the Dow Corning Silicone Transition System prior to fenestration unit installation, meaning the Dow Corning Silicone Transition System would run vertically and horizontally (Figure 7). Using this method, it is recommended that the splice joints be located at the mid span of the fenestration unit opening, at least 12 inches away from a corner (Figure 8). At sills, the strip may be attached with sealant only. At head conditions, the strip, depending on the width being used and length of the run, may be attached with sealant only (Figure 9). If the strip begins to sag, use a mechanical fastener to hold it in place. Ensure there is sealant under the mechanical fastener and also applied over the fastener and tooled.

When installing the strip – and corners if applicable – it may be found that to keep the strip in place through moving units in the shop, a mechanical fastener is desired. A screw can be used to punch through the strip and then sealed over by installing a dollop of sealant over the screw head and mechanically tooing the sealant over the screw head. It is critical for air infiltration performance that any area in which a mechanical fastener is used be completely covered with sealant, and the sealant must be tooled over the fastener (Figure 10).

**Installation of Corners**
Molded corners may be difficult to use in field installations depending on order of construction. If the exterior façade material is already in place at the time the opening is wrapped with the Dow Corning Silicone Transition System, the corner may not have a building face available to adhere to. In these cases, the strip (installed in the opening) can be spliced and folded around the corner and attached to the fenestration unit using sealant. It is critical to apply sealant at every splice joint and ensure full sealant contact at least ½ inch to either side of the splice and along the entire length of the splice (Figures 11 and 12).

When the exterior façade material is not yet in place, corners may be installed at the opening before the fenestration unit is installed, when the Dow Corning Silicone Transition System is installed. Sealant would be applied using the cleaning and installation techniques previously described; it is critical to seal the lap joints between the Dow Corning Silicone Transition System strip and molded corner as shown in Figure 4.

![Figure 7: Dow Corning® Silicone Transition System-wrapped opening.](image)

![Figure 8: Keep splices a minimum of 12 inches from corner.](image)

![Figure 9: Installing strip at head of fenestration unit using sealant.](image)

![Figure 10: Mechanical fasteners may be used with Dow Corning® Silicone Transition System. (Sealant also must be applied over this fastener and tooled.)](image)
Corners shall be installed such that reverse lapping once the unit is installed is avoided. This is most easily accomplished by installing the sill corners first; then the vertical Dow Corning Silicone Transition System pieces will lie over the corners. The head corners can then be installed lapping over the vertical strip pieces, achieving the appropriate shingling. However, this order can be changed provided the appropriate pieces are laid over/under as needed to avoid reverse shingling.

**System Considerations**

Once the fenestration unit is taken to the field, the opposing edge of the strip and corner is attached to the mullion using the same two strips of sealant. Dow Corning recommends attaching the strip to the mullion using Dow Corning 791 Silicone Weatherproofing Sealant or Dow Corning 795 Silicone Building Sealant. Other sealants (Dow Corning 756 SMS Building Sealant or Dow Corning 758 Silicone Weather Barrier Sealant) may be used. For best air infiltration results, Dow Corning recommends two strips of silicone be used for the attachment. Clean the mullion using the two-rag wipe method and solvent. Apply two parallel beads of sealant of ¼ inch to ⅜ inch in diameter to either the strip or the mullion, and then press the silicone strip to the mullion. The compressed bead width should be ½ inch or larger, and it can be visually checked by viewing through the translucent strip (Figures 13 and 14). It has been found that two beads help in eliminating any air infiltration through areas that may not be completely wetted out using hand pressure. Provided full contact can be guaranteed, a single bead of sealant may be used; often, there is only space for one sealant bead on the mullion. Achieving full contact between the strip, sealant and mullion is critical.

When installing the strip – and corners if applicable – it may be found that to keep the strip in place through the installation process, a mechanical fastener is desired. A screw can be used to punch through the strip and then sealed over by installing a dollop of sealant over the screw head and mechanically toothing the sealant over the screw head. It is critical for air infiltration performance that any area in which a mechanical fastener is used be completely covered with sealant, and the sealant must be tooled over the fastener (Figure 9).
Inboard Dow Corning Silicone Transition System Detail

Figure 15: Jamb at inboard condition, metal panel.

Figure 16: Head at inboard condition, metal panel.

Figure 17: Sill at inboard condition, metal panel.

Flush Dow Corning Silicone Transition System Detail

Figure 18: Jamb at flush condition, metal panel.

Figure 19: Head at flush condition, metal panel.

Figure 20: Sill at flush condition, metal panel.
Outboard Dow Corning Silicone Transition System Detail

Figure 21: Jamb at outboard condition, metal panel.

Figure 22: Head at outboard condition, metal panel.

Figure 23: Sill at outboard condition, metal panel.

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