

Starline typically offers supply and installation with window wall and curtain wall projects. The installation materials are offered as noted below. Any materials that are not on the approved list below are required to be approved by Starline.

## Membranes - Concrete and Metal Construction

Starline's standard membrane is Protecto Wrap - Protecto Seal 45 (Cross-laminated polyethylene film laminated to an aluminum foil and an SBS modified rubberized asphalt adhesive with release paper).

Prior to installing Protecto Seal 45 membrane, Protecto Wrap #100 VOC Primer is applied to the substrate. Protecto Wrap #100 VOC Primer ensures the PS-45 bonds to the substrate.

For an additional cost, there are liquid membrane options available. The following alternative liquid membranes are:

1. Tremco Vulkem 350R
2. BASF Masterseal M 200SVL

## Membranes - Wood Frame Construction

Starline's standard membrane is Delta – Vent SA, a 3-layer self-adhered water-resistive barrier (WRB) and air barrier. This is used on all four sides of the rough opening. At the sill a layer of Protecto Wrap - Protecto Seal 45 is applied on top of the Delta – Vent SA.

## Sealants

Starline's standard sealant used at the heel bead and couplers of the window is DOWSIL 1199 and / or GE SilGlaze II SCS2800.

Starline's standard sealant used at the perimeter of the window and / or door to building envelope substrate is DOWSIL Contractors Weatherproofing Sealant (CWS).

For an additional cost, there are alternative sealants which are available. The following alternative sealants are:

1. DOWSIL Contractors Concrete Sealant (CCS).
2. DOWSIL 790 (in lieu of Dow Corning CCS).
3. DOWSIL 795 (in lieu of Dow Corning CWS).
4. Tremco 116 (if using Tremco Vulkem 350R it is to be used in combination with Tremco 116).

**Note:** All sealants require on site adhesion test (pull test) at the mock up stage. There also may be a requirement to complete a compatibility test.

Starline does not recommend the use of urethane sealant due to long-term durability issues, as well as, there is risk that the urethane sealant may bleed at the membrane's rubberized asphalt.

## Shims

Starline uses high impact PVC shims. As a standard, the shims are placed at the window sill location, at 12" O.C. and are placed at the door sill at 4" O.C.

**Note:** Shim spacing can vary and is determined as per project specific engineering requirements.

It is not permitted to shim deflection channels, seismic compensation channels and installation angles more than 3/8".

If it is required to shim more than 3/8" it must be brought to Starline's Contract Manager's attention.

Starline's Contract Manager will contact the Professional Engineer to determine if changes are required.