Method Statement

ME501 Duo Window Membrane HD and SP525 Frame & Façade Sealant & Adhesive (with or without Termination Bar)

Installation of illbruck Membranes to Windows & Doors

Windows Projecting Externally from Backing Wall

Application of Membrane to Window (or Door) Frame

In most cases, it is probably easier to apply the membrane after fixing the window to avoid the membrane being dislodged during the installation process whilst the adhesive is uncured.

1. Wipe clean the perimeter edge of the window (or door) frame using illbruck AW421 or AW414 Cleaners. Take care not to splash solvent onto powder coated frames or other sensitive surfaces.

2. Measure and pre-cut individual lengths of ME501 to size to suit whether using ME241 EPDM Corners or not and depending on if the ME501 is applied before or after the Corners (see below).

3. Starting at the sill, apply a continuous bead of SP525 of minimum 10 mm diameter into the outermost frame groove or other appropriate location. Please note, OT015 High Tack Membrane Adhesive can also be used to bond ME501 to frames or construction material and must be used to bond to ME241 EPDM Corners.

4. Ensuring that the logo/printing is facing outwards, place the edge of ME501 onto the adhesive bead so that the bead is 15 mm inside the membrane edge and apply finger pressure until the adhesive is just visible at the edge along the length of membrane. To ensure that a good bond takes place and that the adhesive is evenly spread, apply firm pressure and roll over the top of the membrane (with the adhesive underneath) to consolidate the bond using a seam roller.

The compressed bead should now be approximately 20-30 x 2-3 mm. If it is not possible to apply a consolidated bead of minimum 20 mm, please consult tremco illbruck technical department.

If carried out correctly, a small amount of adhesive will be just visible at the edge of the membrane.

A termination bar may be used to secure the membrane to the frame. This provides a more secure fixing, particularly if the membrane is applied prior to frame installation.

If used, place the termination bar flat into or across the groove and fix by screwing through the adhesive bead, 50 mm from each end and at max. 250 mm centres.

Application of Membrane to Backing Wall

If a breather membrane has previously been applied to the backing wall, cut back to the line of the perimeter membrane to enable the latter to be bonded/sealed directly to the backing wall.

Ensure the structure is free of debris and other material which may affect adhesion.

Using ME241 EPDM Corners (it is strongly recommended to use these in order to provide a robust seal of the membrane at the corner joints).

Application with ME241 Corners installed before ME501 (applicable if bonding ME501 to frame with SP525 or OT015).

5. At each window frame corner, place the ME241 Corner ‘dry’ with the flanges against the corner of the window frame and the backing wall. Use a marker to indicate the proposed location. Remove ME241, apply illbruck OT015 adhesive to the backing wall as shown in Fig.1 and place ME241 onto the adhesive. Consolidate by pressing and rolling until the adhesive is seen at the edge of the Corner (Fig.2).
6. Cut the membrane to appropriate lengths for the sill, jambs and head as in steps 2 – 4 above. The membrane should overlap the Corner by running past the window dimension. The separate lengths should be overlapped and bonded with SP525 to the backing wall and with OT015 to the Corners in the above order to ensure water run-off. Also bond the short edges (width) of the membranes with OT015 to the ME241 to prevent any water ingress.

7. Seal the edge joint between the newly applied membrane and the existing breather membrane (if applicable) using illbruck ME315 Total Protection Tape.

If the ME501 is bonded to the window frame with self-adhesive strip or integral gasket, the ME241 Corners must be applied after the ME501:

8. Cut the ME501 to appropriate lengths for sill, jambs and head (to match the window dimensions) and apply in this order fixing to frame as in steps 2 – 4 above and backing wall (with SP525). Consolidate the adhesive bond to wall using a seam roller.

9. Place the ME241 Corner ‘dry’ with the flanges against the corner of the window frame and the backing wall and use a marker to indicate the proposed location. Remove Corner, apply OT015 adhesive to the backing wall as shown in Fig.1 and place Corner onto the adhesive. Consolidate by pressing and rolling until the adhesive is seen at the edge of the Corner (Fig.2).

10. Seal the edge joint between the newly applied membrane and the existing breather membrane (if applicable) using illbruck ME315 Total Protection Tape.

If ME241 EPDM Corners are not being used:

11. Starting at the sill, at the extents of the membrane which run past the dimensions of the frame, tuck the un-bonded portion of membrane tight under the sill and fold at 90° to return down the face of the sheathing board. Mark a chalk line on the board to indicate the edge of the membrane. Make a horizontal cut level with the face of the sheathing board and in line with the bottom of the sill using illbruck cutting shears from the end of the membrane towards the frame. This only needs to be long enough to span from the end of the membrane, across the perimeter gap to meet the frame. Fold the flap produced by cutting to locate flat against the jamb of the frame. The width of the flap should be equal to the depth of the frame (front to back), or minimum cover required onto frame (if less) plus the distance of the projection from the structure to the back of the frame. For example: 75 mm depth of frame plus 30 mm projection = 105 mm flap of ME501.

12. Bond the flap onto the jamb using SP525.

13. Repeat steps 11 – 12 at the jambs and head. The flaps produced by the cutting will fold onto the top of the frame and under the sill at the jambs and fold onto the jambs at the head.

14. Pull the membrane away (if necessary, fold back and secure to frame with masking tape) and apply a bead of SP525 at approximately 10 mm diameter, continuously 15 mm inside the chalk line, continuing past the edge of the frame for the distance covered by the width of membrane running at 90°. If the ME501 overlap onto the sheathing board is wider than 200 mm, more adhesive will be required to bond to the board. Apply dots or short linear beads of SP525 to the board between the frame and the membrane edge bead at intervals of no more than 200 mm. On particularly porous substrates, it may be necessary to use AT140 Primer before applying SP525.

15. Push the ME501 carefully into place ensuring that firm contact is made with all adhesive applications and consolidate with a seam roller. Ensure that the edge bead is just visible along the length of membrane. The compressed bead should now be approximately 20 – 30 x 2-3 mm.

16. Repeat steps 14 - 15, continuing with the jambs and finally the head. The membrane at the sill must be overlaid by the membrane on the jambs and the membrane on the jambs must be overlaid by the heads.

17. Apply adhesive as necessary following the guidance above to ensure that all folds and overlaps are sufficiently bonded. If necessary, apply a patch of ME501 rather than rely solely on adhesive to seal holes or gaps.

18. As a final check, inspect the full perimeter seal, with particular focus on the corner joints to ensure a complete seal without any gaps.

NOTE:
It is essential to install ME501 for use as an external weather seal with the printed (fleece) face facing outwards. This is in order to provide UV resistance for up to 12 months if the membrane is left uncovered temporarily due to sequencing on site. Always bond both membrane edges within 72 hours maximum to avoid damage due to unsecured membrane becoming exposed to UV (to the shiny face) and/or mechanical abrasion due to contact with other components during periods of high wind pressure. It is not necessary to spread the adhesive with a pallet knife or similar prior to pressing the membrane into place. Neither is it necessary to over-paste the edges of the membrane with additional adhesive. Very Important: If any part of the MEMO1 membrane is to be bonded to or is required to link up with or overlay an existing membrane made from a bitumen, asphalt or polyethylene based material an alternative adhesive must be used and a separate test must be conducted to ensure material compatibility. We provide a service for testing compatibility of our adhesives with 3rd party materials and would advise that our representatives are made aware of this requirement in order to organise appropriate samples and to instigate the required testing (comprehensive testing takes up to four weeks).