

Application of illbruck membranes using paste adhesive

INSTALLATION GUIDANCE

illbruck membranes installed using a paste adhesive

This is an illustrated guide to demonstrate the correct method for installing a range of illbruck membranes, ME501 Duo HD, ME010 FR Window & Door Sealing Membrane, ME007 FR Window & Door Sealing Membrane HD & ME220 EPDM external window/door perimeter sealing membranes, using an illbruck paste adhesive.

This guide should be read in conjunction with the relevant illbruck Technical Data Sheets, Safety Data Sheets, and written method statements where available: <https://www.illbruck.com>.

The examples shown in this guide are based on a forward-facing window installed in a framed wall construction.

Actual project details, fixing support arrangements and window profiles may differ – however the same basic installation principles will apply. If project details differ significantly contact Tremco CPG UK Ltd for advice. Further on-site toolbox training can be arranged where required by contacting Tremco CPG UK Ltd.

All edges of the membrane must be securely bonded and consolidated with an uninterrupted 20 to 30 mm band of continuous adhesive around the entire frame as described in this document. The width of membrane bonded back to the substrate should be a typically 100 mm with a minimum width of 50 mm.

Any deviation from illbruck's best practice installation guidance may affect the performance of the installed membrane and invalidate any warranties.

Standard paste adhesives by membrane type:

illbruck membrane	illbruck paste adhesive
illbruck ME501 Duo Window Membrane HD	illbruck SP525 Frame and Façade Sealant & adhesive
illbruck ME010 FR Window & Door Sealing Membrane	illbruck SP025 Fire Membrane Adhesive
illbruck ME007 FR Window & Door Sealing Membrane HD	illbruck SP025 Fire Membrane Adhesive
illbruck ME220 EPDM membrane	illbruck OT015 High Tack EPDM & Membrane Adhesive

Tools and accessories:

- Sharp retractable bladed knife or illbruck cutting shears
- Marker or pencil to mark out the membrane position
- Stout seam roller
- illbruck AA956 Sausage Gun 600 – Pro Combi or similar quality 600 ml applicator gun
- illbruck AT200 General Purpose Cleaner for Degreasing Metals
- A clean cloth for use with illbruck AT200

Before commencing work:

- Ensure all surfaces are clean, dry and free from dust, grease and debris and free from any contaminants that may affect the adhesive bond.
- Any over spills or excess cured fire rated silicone or compounds should be mechanically removed from the face of the sheathing boards where the illbruck membrane will be applied. If the overspill is excessive, please consult illbruck's Technical Department for further assistance.
- Where any silicone-based compounds remain, such as within the board joints, they will need to be treated with an illbruck primer prior to installing the membrane/adhesive.
- Clean the window/door frame down with illbruck AT200 or a plain mineral spirit such as methylated spirit.
- illbruck ME501, ME010, ME007 or ME220 should always be directly bonded to the substrate and must not be lapped and adhered to an existing full façade membrane.
- If a façade membrane has already been applied over the sheathing board, temporarily cut back sufficiently to allow for the application of the ME501, ME010, ME007 or ME220 – this will be reinstated afterwards.
- Always check that the membrane is installed the correct way round in accordance with the Technical Data Sheet.
- Check the compatibility of the relevant illbruck paste adhesive with the nominated substrate type and use a primer when recommended to enhance the adhesive bond.
- Where the membrane interfaces with a third-party waterproofing material or similar, seek further advice on compatibility from CPG UK Ltd.



Application method:

Step 1:

Window membrane application shall always start at the sill.

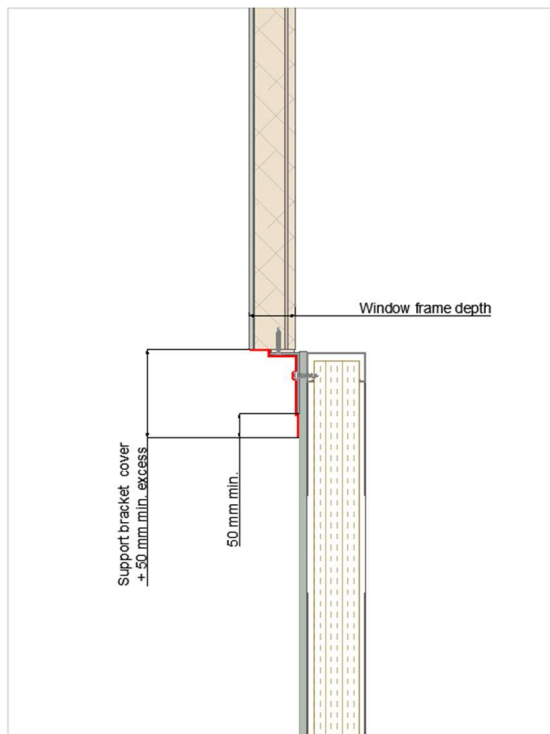


Figure 1

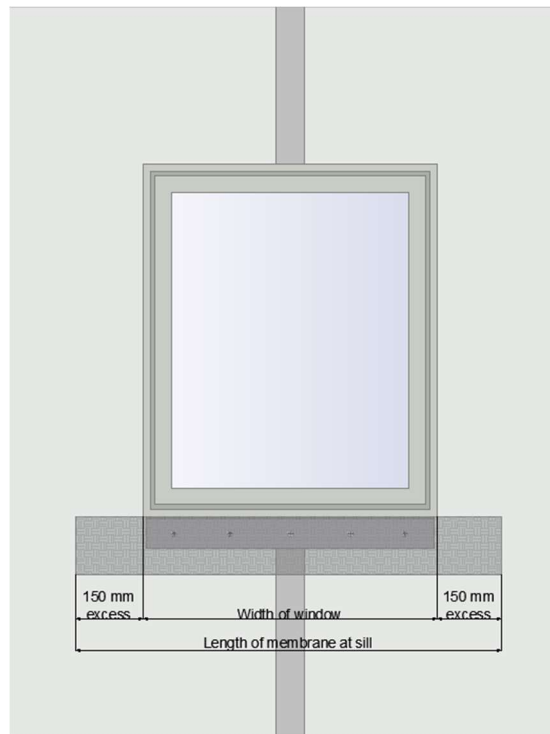


Figure 2

- Determine the membrane width and length required.
- At the sill the width of the membrane should be wide enough to cover the support brackets and with at least a 50 mm excess to enable bonding to the primary substrate on the trailing edge. It is possible in some circumstances that the sill membrane may be wider than the head and jambs (Figure 1).
- For the membrane length, measure the window frame width and add 150 mm excess at each side of the frame (Figure 2).

Step 2:

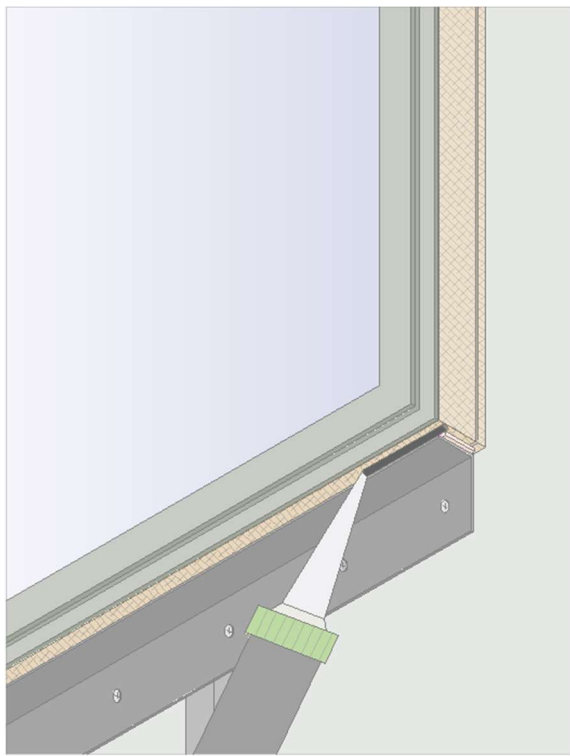


Figure 3

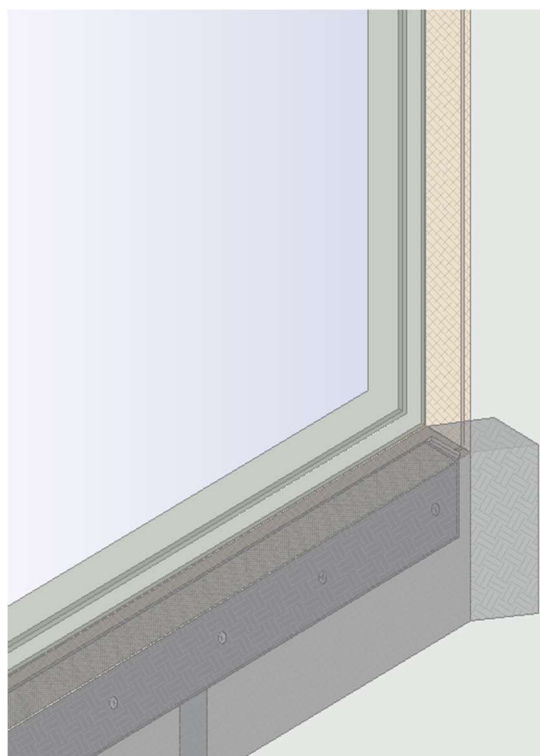


Figure 4

- Always ensure that the membrane is installed in the correct orientation, for ME010 & ME007 FR Window & Door Sealing Membranes the smooth /coated face of the membrane should always face outwards toward the external environment.
- Offer up the membrane to the underside of the sill, ideally towards the middle of the frame. Position the membrane so that it is central and mark up the centre with the required overhang at each end.
- Once happy with the positioning, set aside and apply a uniform 10 mm diameter bead of paste adhesive on to the frame in a straight line (Figure 3).
- Using the palm of your hand, offer up the membrane and smooth on to the frame in a straight line, gently pressing the membrane on to the adhesive ribbon. The membrane should overlap the centre of the adhesive ribbon by 15 mm.
- Starting at one end, apply firm pressure with an illbruck seam roller and roll over the top of the membrane where the adhesive is located underneath.
- As you work along the length of the membrane the adhesive will begin to visibly ooze out from under the membrane's edge. When the visible ooze is a uniform 2 - 5 mm wide along the entire run, the adhesive is consolidated (Figure 4).
- Do not smooth or scrape away the excess 'ooze', this must be left intact as a visual indicator that the adhesive has been applied in the correct location, in the correct proportions and has been fully consolidated.

Step 3:

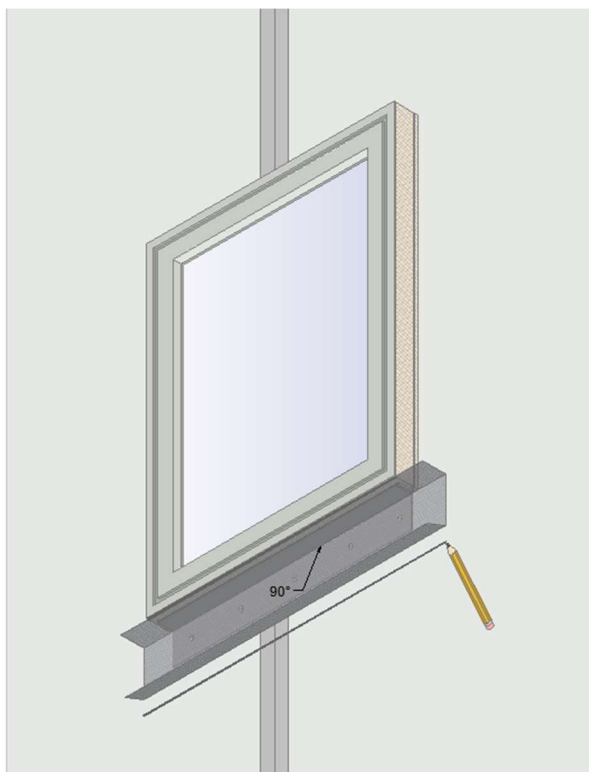


Figure 5

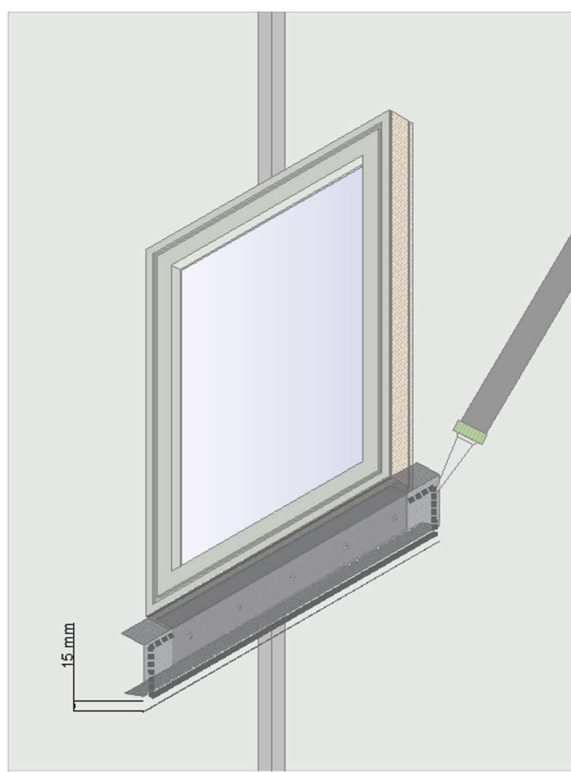


Figure 6

- Push and fold the remainder of the membrane back towards the wall and make a right angle at the junction of the frame and adjacent wall. Use a seam roller to make a neat crease at the turn of the right angle. This will help to re-locate the membrane in the next step.
- Fold the membrane around any support brackets ensuring that you have at least 50 mm available on the trailing edge that can be bonded to the substrate (See Figure 1).
- Make a mark along the entire run where the trailing edge of the membrane will terminate against the substrate (Figure 5). Now apply a consistent and uniform 10 mm diameter bead of adhesive along the full length of the run, 15 mm inside of the installed membrane line and then continue the bead 15 mm inside the edges and the fold of the excess membrane (Figure 6).
- Using the palm of your hand, dress and smooth the membrane around the profile of the frame and any support brackets whilst gently pressing the membrane on to the adhesive ribbon. The membrane should overlap the centre of the adhesive ribbon by 15 mm.
- Consolidate the adhesive by applying firm pressure with a seam roller until a consistent uniform 2 – 5 mm wide ooze is visible as described in Step 2. Do not smooth out or scrape away the ooze.

Step 4:

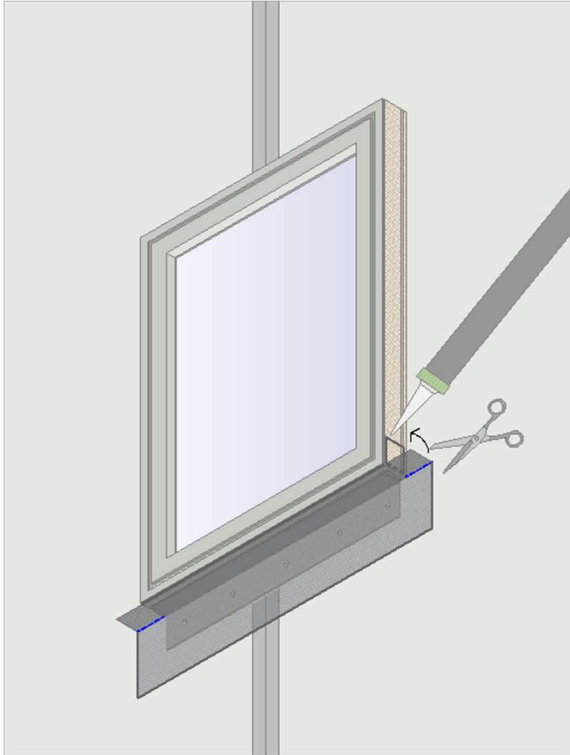


Figure 7

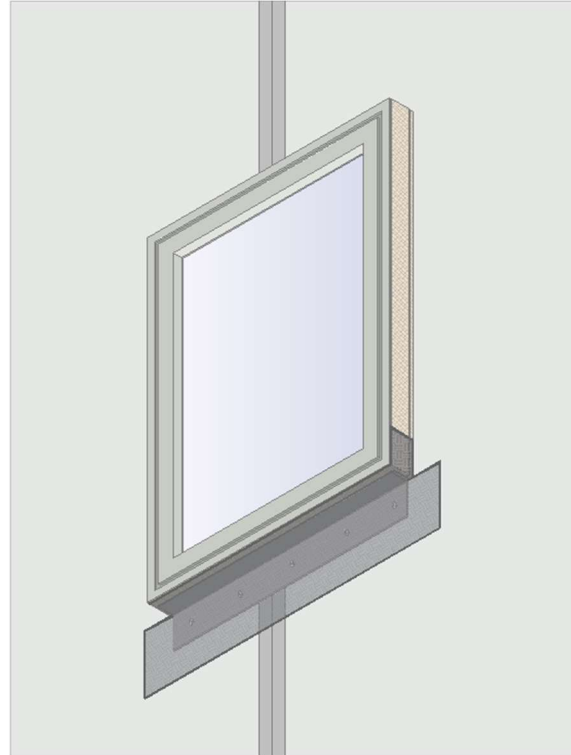


Figure 8

- There should now be an un-bonded section of membrane at each end of the window frame.
- Using illbruck cutting shears cut a neat straight line (shown in Figure 7 in blue) from the membrane ends towards the window frame to form a flap. Fold the flap upwards and mark the side and end point against the frame.
- Apply adhesive in a continuous ribbon (shown in Figure 7) 15 mm inside the lines. Press the flap of membrane on to the adhesive ribbons and consolidate as described in Stage 2.
- All edges should be bonded and consolidated as shown in Figure 8.

Step 5:

The next membrane sections to be installed shall be the window jambs.

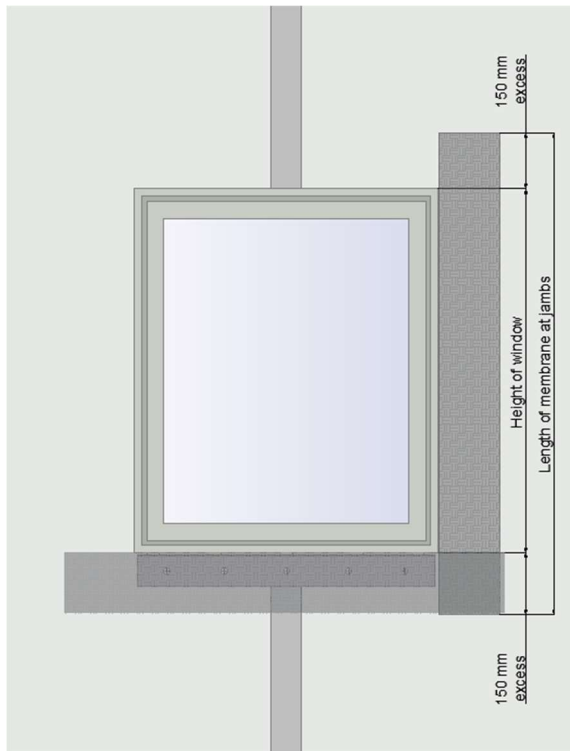


Figure 9

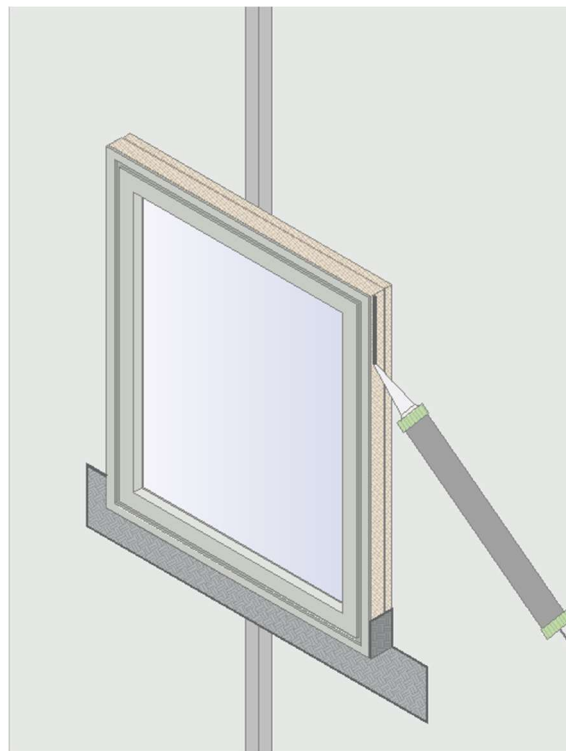


Figure 10

- Measure the length of membrane required plus 150 mm excess at each end (Figure 9).
- Offer the membrane up to the frame and position so it is central and mark up the centre.
- Apply a 10 mm diameter bead of adhesive on to the frame (Figure 10).

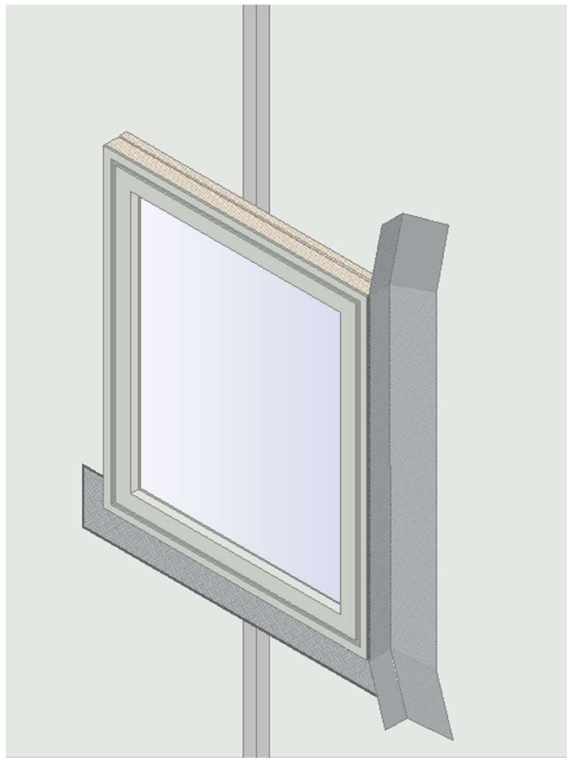


Figure 11

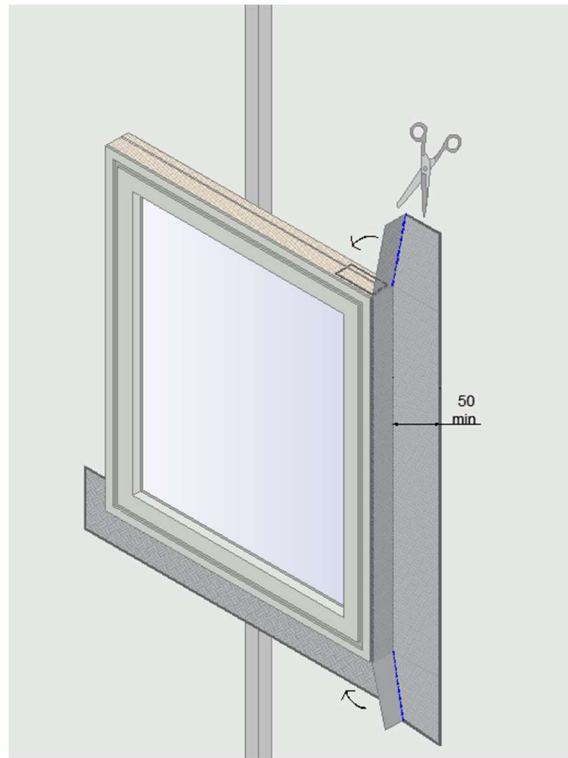


Figure 12

- Offer up the membrane and smooth the membrane on to the frame in a straight line and press into the adhesive ribbon ensuring the membrane overlaps the adhesive by 15 mm.
- Consolidate with a seam roller until a uniform 2 - 5 mm ooze is visible.
- Push and fold the remainder of the membrane into the junction of the frame and substrate making a 90° angle (Figure 11).
- Mark up the position of the trailing end of the membrane and apply a bead of adhesive 15 mm inside the line and continue down and across towards the frame to bond the excess to the substrate.
- Press the membrane into the adhesive and consolidate until a uniform 2 - 5 mm ooze is visible.
- Cut the un-bonded section to form a flap and mark the position on the frame (Figure 12).
- Apply a continuous ribbon of adhesive 15 mm inside the line (Figure 12).
- Press the flap of membrane into the adhesive and consolidate as previously described.
- Repeat the procedure for the other jamb.

Step 6:

Finally install the membrane to the window head.

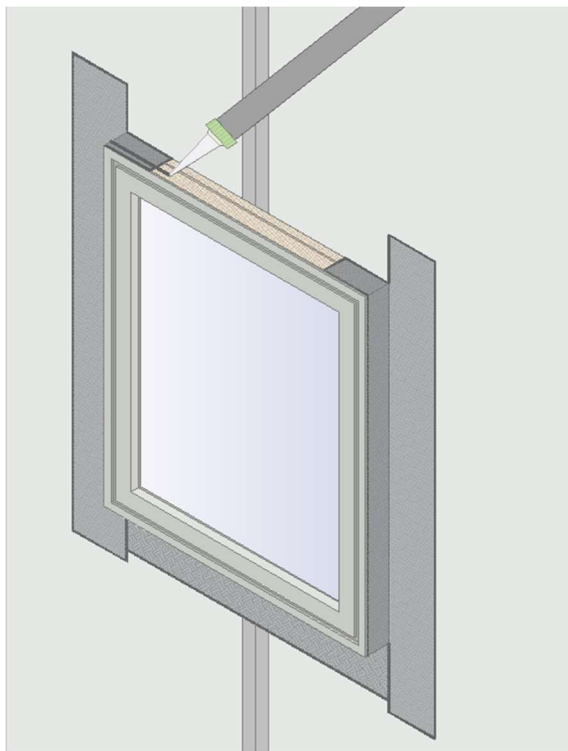


Figure 13

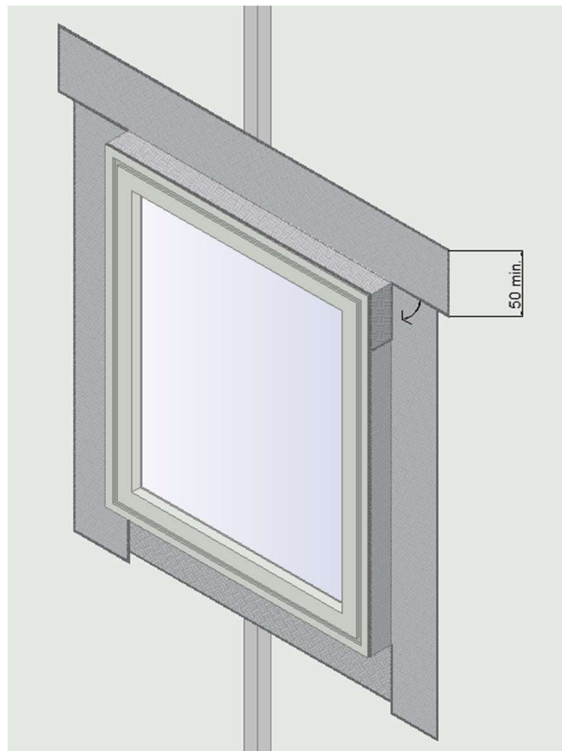


Figure 14

- Measure the length of membrane required plus 150 mm excess at each end as previously described for the sill membrane.
- Offer the membrane up to the frame and position so it is central and mark up the centre.
- Apply a 10 mm diameter bead of adhesive on to the frame (Figure 13).
- Offer up the membrane and smooth the membrane on to the frame in a straight line and press into the adhesive ribbon ensuring the membrane overlaps the adhesive by 15 mm.
- Consolidate with a seam roller until a uniform 2 - 5 mm ooze is visible.
- Push and fold the remainder of the membrane into the junction of the frame and substrate making a 90° angle.
- Mark up the position of the trailing end of the membrane and apply a bead of adhesive 15 mm inside the line and continue down and across to bond the excess to the substrate.
- Press the membrane into the adhesive and consolidate until a uniform 2 - 5 mm ooze is visible.
- Cut the un-bonded section to form a flap and mark the position on the frame.
- Apply a continuous ribbon of adhesive 15 mm inside the line.
- Press the flap of membrane into the adhesive and consolidate until a uniform 2 - 5 mm is visible.
- Repeat the procedure for the other side of the head (Figure 14).

Step 7:

When all four sides are complete the membrane should resemble a picture frame around the perimeter as shown in Figure 14.

Check for small holes or omissions on the back and front projection where the membrane crosses at the corners. Any small holes or omissions need to be sealed to ensure continuity of the membrane seal using one of the following options:

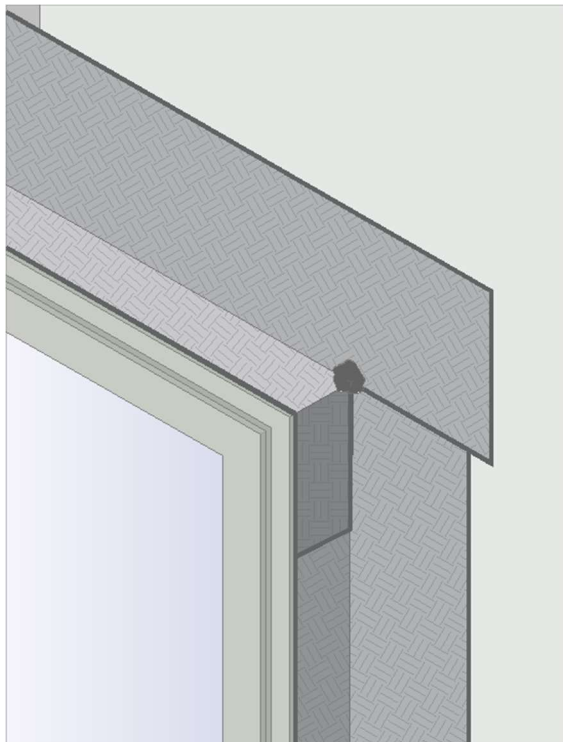


Figure 15 – Option A

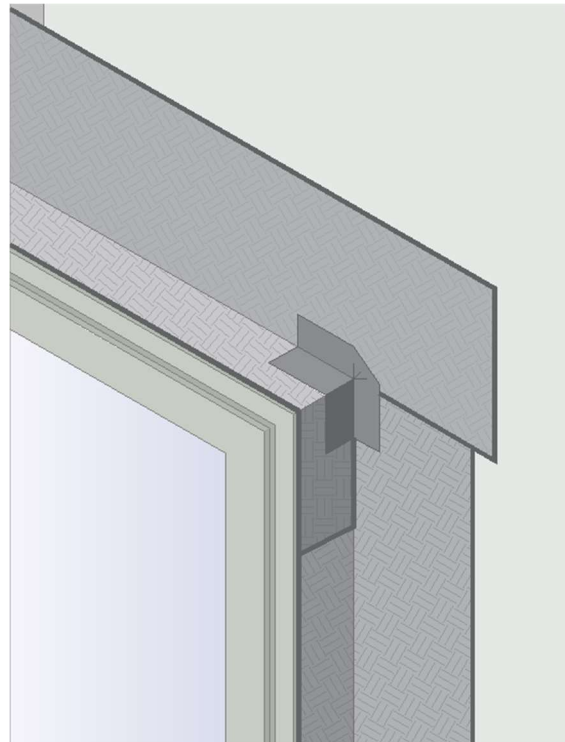


Figure 16 – Option B

- Option A: Seal any gaps with a dab of compatible illbruck adhesive sealant. Do not smear or flatten out – apply a neat dab or bead as required and leave intact.
- Option B: Seal any gaps by fabricating a patch using illbruck ME316 Endurance Tape and adhere to surface/face of membrane to seal hole.

Your application is now complete.

Support

Here at Tremco CPG UK Ltd, we have technical experts and field support teams who can help you – from specification to application, we're on hand.

If you're looking for more information about fire rated membranes, or how to pick the right membrane for your application, please contact our team: **hello@tremcocpg.com**.

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