

# i3 Perimeter Sealing of Windows and Doors

The innovative illbruck i3 system encompasses the concept of sealing out weather whilst sealing in comfort and energy savings. The system incorporates a choice of products to effectively seal on three levels: Weathertight (but vapour permeable) externally, airtight internally, with a thermal and acoustic insulation layer between. The system has BBA accreditation and has a 10 year performance guarantee\*.

*\*FM330 and ME508 currently under BBA assessment*

## Application

Brick & block cavity wall, including proprietary cavity closer, windows installed within reveal

### i3 Products:

TP600 – Compriband 600 (External weather seal)

FM330 – Pro foam Airseal (Insulation)

ME508 EW/F – Duo Membrane EW/F (Internal airtight seal)

## External Seal - TP600

Determine the joint width around the window/door and select the appropriate size of TP600. Cut off the outer green liner, the white release liner and the initial wedge shape at the start of the roll. The tape can be applied to the frame immediately before fixing or afterwards into the pre-formed joint. In the former case, the tape may expand too quickly in warmer temperatures, therefore it may be better to apply after frame fixing in such conditions. Alternatively, the rolls can be chilled prior to use which will retard the expansion. When determining the length of tape required for each side of the frame, allow an extra 20 mm/m (based on the opening size, rather than the window dimension).

The tape should always be set back from the face of the joint by a minimum 2 mm.

If installing the TP600 after the window is fitted, it is useful to apply the head or sill length to the frame immediately prior to fitting the frame, then apply the remaining lengths when the frame is in-situ, beginning at the base of the frame working upwards, ensuring the tape is not stretched as it is located. Locate the tape with the adhesive face along the edge of the frame, allowing the extra 20 mm/m as above. Ensure that the corners and also linear joints when starting a new roll are tightly butt-jointed.

For check reveals, it is easier to offer the frame into the opening, then tilt inwards from the bottom and apply the tape, to the head first, then jambs, rolling onto the frame face in an upwards direction. The frame can now be pushed forward and fixed in the opening, compressing the TP600 against the back of the external brickwork. A thinner and narrower size of TP600 will normally be required for check reveals. Before application, check to ensure that there is sufficient cover of frame behind the check reveal for the width of tape chosen (allow the 2mm set-back as above).

On completing a roll, do not use the wedge shape at the end. Ensure a tight butt joint when continuing the seal with a new roll.

Check all corner and butt-joints to ensure no gaps are present.

## Method Statement



## Perimeter Sealing of Windows and Doors

### Intermediate Seal - FM330 Pro foam Airseal

Ensure that the TP600 has fully expanded to seal the perimeter joint, then prepare the FM330 per instructions in TDS.

If the ME508 membrane has already been applied, fold back against the window frame and temporarily secure with masking tape whilst applying the FM330.

Apply from the inside to achieve 80-90% filling of the joint depth in order to allow some post-expansion of the foam. For vertical joints, spray from the bottom upwards. If post-expansion results in the foam filling outside of the joint, allow the foam to cure then trim off the excess with a sharp knife. Once the foam is fully cured, application of the membrane can commence.

### Internal Airtight Seal - ME508 EW/F Duo Window Membrane

The method of application depends on whether the membrane is applied before or after the window is installed. The 'E' annotation identifies that the acrylic and butyl self-adhesives are located on the same membrane face and this format is used for post-fitting, whilst the 'W' annotation defines adhesives on opposite membrane faces and is used for pre-fitting. For most applications, the reveal substrate (typically blockwork) is suitable for direct bonding of the membrane, however if the conditions are particularly porous, dusty, damp or when working at low temperatures, it may be necessary to prime the substrate using ME901 or AT140 Primers.

#### 1. Application Pre-Window Installation

The window should be laid horizontally on trestles or similar. Select appropriate width of ME508 to allow for suitable cover onto the edge of the window perimeter and then onto the internal window reveal. Starting at the bottom of the frame, bond the membrane under the sill using the narrow self-adhesive strip on the printed face of the membrane. Work to the first corner and at that point, allow an extra 20-25 mm of membrane as the corner is turned to fold the self-adhesive strip against itself, forming a 'loop'. Continue around the frame repeating the corner detailing and complete with a 50 mm overlap under the sill.

Locate fixing brackets to the frame, over the membrane. Install window and prior to fixing, ensure that the corner 'loops' are free within the reveal.

In order to apply the FM330 PU foam, fold the membrane back against the window frame and temporarily secure with masking tape whilst applying the FM330. After the foam has cured, start to remove the release liner on the 1st (narrow) self-adhesive strip on the reverse side of the membrane (facing the reveal). Once satisfied with the location, remove the 2nd (wider) release liner and continue around the perimeter, only consolidating the bond with a seam roller once satisfied with the positioning and flatness against the reveal and that the membrane is tight in the corners, otherwise airtightness will be compromised. If there are any small gaps still present at the corners or when passing over fixing brackets, these can be sealed using SP525 Frame & Façade Sealant & Adhesive.

#### 2. Application post-window installation

After the window has been fitted and the frame cleaned, the FM330 is applied as above. Use an appropriate width of ME508 in order to achieve location of minimum 10 mm onto the frame face and sufficient cover onto the window reveal. Cut four lengths of membrane for the corners: 300-400 mm in each case.

Remove the narrow release liner from the reverse (non-printed) face and locate the membrane against the bottom left or right-hand corner jamb, bonding the self-adhesive with a minimum 10mm of contact with the frame. At the corner, cut across the self-adhesive for 20 mm to allow the membrane to fold at 90° and then align across the first part of the bottom of the frame. Locate the self-adhesive in the same way, then remove the other wider liner and press the membrane down against the reveal. Ensure that the membrane is tight at the corner and there is no gap. Once this has been achieved, consolidate with a seam roller. Apply all four corners using same method.

Apply linear membrane to join the corners, with a 50 mm overlap in each case. Consolidate the complete perimeter by rolling. If there are any gaps at the corners or when passing over fixing brackets, seal with SP525.

For further information on all i3 system products, please consult the individual TDS's and Product Range brochure.

\*Under the conditions specified by tremco illbruck. Only valid on receipt of the correct registration documents in accordance with terms and conditions, available on request.