

## Description

ME012 Duo Window Fire Membrane is a polyester based waterproof and airtight but vapour permeable window perimeter sealing membrane with enhanced UV stabilisation and a Class B1 (not easily flammable) Classification under DIN 4102 and Class B (s<sub>3</sub>-d<sub>0</sub>) according to EN13501-1.

## Colour

Black

## Packaging

Supplied in slit widths 60 mm-1500 mm on 50 m rolls.

Item No.	Roll Width (mm)	Roll Length (m)	Rolls/Box
	60	50	1
	80	50	1
	100	50	1
	150	50	1
	200	50	1
	250	50	1
	350	50	1

\*Other widths are available upon request – please consult tremco illbruck Customer Services with your requirements and for confirmation of lead times.

## Technical Information

Property	Standards	Result
Grammage	EN 1849-2	Approx. 160 g/m <sup>2</sup>
Thickness	EN 1849-2	Approx. 0.5 mm
Reaction to Fire	DIN 4102	B1 (not easily flammable)
Reaction to Fire	EN 13501-1	Class B (s <sub>3</sub> -d <sub>0</sub> ) (very limited contribution to fire, fixed to thermal insulation)
Resistance to Water Penetration	EN1928	W1 (water does not pass)
After Ageing	EN 1297/1296	W1 (water does not pass)
Maximum Tensile Strength- Lengthwise/ Crosswise	DIN 12311-1	Approx. 400/230 N ± 15%
After Ageing	EN 1297/1296	>75 % of value as new
Elongation of Break- Lengthwise/Crosswise	EN 12311-1	Approx. 30/35% ± 15%
After Ageing	EN 1297/1296	>75 % of value as new
Tear Growth Resistance / Nail Shank	EN 12310-1	Approx. 100 / 120 N ± 15%
Vapour Diffusion- Equivalent Air Layer Thickness	EN ISO 12572	Sd-value: Approx. 0.04 m (vapour open)
Air Permeability	EN 12114	Approx. 0.1 m <sup>3</sup> /m <sup>2</sup> .h.50 Pa (air tight)
Service Temperature	EN 13859-1	-40°C to +150°C
Flexural Behaviour in Cold Conditions	EN 1109	<-20°C
UV Resistance		Permanent (in correct orientation)
Storage	Store in shaded, dry conditions and avoid stacking pallets	
Shelf Life	1 year when stored as recommended in original unopened packaging	



## ME012

### Duo Window Fire Membrane

#### Usage / Purpose

To provide a high performance breathable air and weather seal to the perimeter joint between the window / curtain wall and the external construction reveal that is permanently UV stable and has a Class B1 (DIN4102-1) & Class B – s<sub>3</sub>-d<sub>0</sub> (EN13501-1) reaction to fire. Due to the fixed Sd value, the membrane is suitable for windows projecting from sheathed and framed walls.

#### Key Benefits

- Fire resistant to Class B1 (DIN 4102) & B [s<sub>3</sub>-d<sub>0</sub>] (EN13501-1)  
- fixed to thermal insulation
- Highly water tight – does not allow driving rain to pass from outside to inside
- Highly airtight to prevent unplanned air loss
- Complies with “inside tighter than outside” in order to facilitate efficient vapour control
- Excellent drying potential of the perimeter joint (due to the membrane’s vapour permeability) avoiding mould growth and physical damage
- Permanently UV stable in open joints between cladding and window frame

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### Intended Scope of Application

- ME012 can be applied to the entire perimeter of windows and doors that project from the backing wall in a built up wall construction such as SFS or timber framed and sheathed walls.
- The principal purpose of ME012 is to :
  - Prevent water penetration through the window/door perimeter gap from outside to inside
  - Manage and control moisture migration on the cold side of the wall build up
  - Remain vapour open to prevent localised instances of interstitial condensation from occurring
  - Provide a perimeter seal to windows and doors to prevent unplanned air loss
- ME012 is classified under DIN 4102-1 as B1 (“not easily flammable”), and Class B- s3-d0 (“very limited contribution to fire”) under EN13501-1. **ME012 is not intended to act as a fire barrier in its’ own right.**
- ME012 may add an additional level of protection specifically to the window perimeter joint when applied adjacent to other proprietary fire resistant materials such as Cavity Closures and Fire Socks that conform to BS476: Part 20.
- To ensure stability of the seal in the early stages of a fire, ME012 should be bonded to the window/door frame and the structure (sheathing board) with SP525 Frame and Façade Sealant & Adhesive.
- As a means of providing additional mechanical fixing of the membrane to the frame and structure, an optional termination bar can be considered.

### Fixing Function

- Bonding the ME012 in the usual manner will create and maintain the water and air seal during normal service conditions; but the adhesive may rapidly degrade when exposed to the intense heat generated during the flash over stage of a fire.
- If used, termination bars are likely to prolong attachment of the membrane to the fixed elements should such an unfortunate event occur. Termination Bars should be made from a material with similar fire resistant properties as the fixed elements.

### Application – Bonding with SP525 Adhesive after Frame Installation

(Suitable for single windows and curtain walling or multiple coupled windows)

- ME012 is applied in the same way as other window sealing membranes such as ME501 Duo Window Membrane HD and ME220 EPDM Membrane.
- For a detailed step by step guide please refer to Method Statement: “Installation of illbruck Membranes to Windows and Doors – Windows Projecting Externally from Backing Wall”

### Preparation

- Ensure surfaces are clean, dry, free from dust, debris and any other contaminants that may affect adhesion.
- Beware that the excessive use of pre-applied silicones and or intumescent mastics in the adjacent area may affect the adhesion of SP525. We recommend that silicones and mastics used to seal joints between sheathing boards and concrete interfaces are used sparingly to prevent over-spill into an area where the SP525 is likely to be used.
- The use of illbruck primers may be required – if in doubt please consult tremco illbruck technical department before commencing works.

### Fixing to the Frame

- ME012 Membrane should be positioned with the glossy face outwards and the dull face inwards.
- Starting at the sill- apply a consistent minimum 10 mm diameter bead of SP525 adhesive in the usual way to the edge of the frame.
- Locate the pre-cut length of ME012 with finger pressure on the frame.
- When satisfied with positioning, consolidate the bond by applying pressure and rolling over the top of the membrane with a seam roller until a small amount of “ooze” is visible. The compressed bead should 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 required, immediately above the consolidated adhesive ribbon, mechanically fix\* a thin termination bar with screws ensuring that the fixings pass through the wet adhesive underneath to maintain the seal.
- Cut, fold and seal the corners as per method statement.
- Complete application to the jambs and then the head.

### Completing the Lap to the Structure

- Mark out with a straight edge around the entire perimeter the position where the trailing edge of the membrane will terminate on the sheathing or other structural element.
- Mark out another dotted line 15 mm inside of the first line around the entire perimeter. This is the position where the SP525 adhesive will be placed.
- Starting at the sill- Apply a consistent 10mm diameter bead of SP525 adhesive in the usual way onto the dotted line.
- Locate the trailing edge of ME012 with finger pressure onto the adhesive ribbon.
- When satisfied with positioning, consolidate the bond by applying pressure and rolling over the top of the membrane with a seam roller until a small amount of “ooze” is visible. The compressed bead should be 20 – 30 x 2-3 mm.
- If required, immediately above the consolidated adhesive ribbon mechanically fix\* a thin termination bar with screws ensuring that the fixings pass through the wet adhesive underneath to maintain the seal.
- Cut, fold and seal the corners as per method statement.

\*We advise that mechanical fixing spacing ought to be a maximum 250 mm centres. Please use your own discretion.

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### Please Note

- The connection of the trailing edge of the membrane to the structure should be completed as soon as possible. Avoid leaving the trailing edge open to the effects of wind to reduce the possibility of damage to the partially installed membrane.
- Fire-rated Breather Membranes such as ME010 UV + Fire or standard “popular” Breather Membranes can be taped or adhered (using a compatible adhesive) to the ME012 Duo Window Fire Membrane at the window interface to ensure continuity of the temporary weather tight line. ME316 EnduranceTape or ME315 Total ProtectionTape is ideally suited to this application.
- For further information regarding SP525 adhesive please consult technical data sheet, available from website ([www.tremco-illbruck.co.uk](http://www.tremco-illbruck.co.uk))

### Health & Safety Precautions

Safety data sheet must be read and understood before use.



#### Technical Service

tremco illbruck has a team of experienced Technical Sales Representatives who provide assistance in the selection and specification of products. For more detailed information, service and advice, please call Customer Services on 01942 251400.

#### Guarantee / Warranty

tremco illbruck products are manufactured to rigid standards of quality. Any product which has been applied (a) in accordance with tremco

illbruck written instructions and (b) in any application recommended by tremco illbruck, but which is proved to be defective, will be replaced free of charge.

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