

Effisus Breather FR-B ST

1.Summary

The **Effisus Breather FR-B ST** is a waterproof and breathable membrane, engineered to meet the standard requirements of modern construction. With a **B-s1,d0 fire classification**, also providing **W1 watertightness**, it delivers enhanced safety and performance for everyday facade applications.

Manufactured with a special coating allowing vapour diffusion, and designed to perform long term under extreme conditions, the membrane offers excellent resistance to **UV exposure** and temperatures up to **120°C**, ensuring consistent performance over time.

The **system** includes a wide range of accessories allowing its installation on the most demanding project requirements promoting facade efficiency.



2. Scope of Usage

In General: Wall lining membrane.

3. Presentation and Product Details

3.1 Effisus Breather FR-B ST Membrane

Standard roll width: 1.50m

Roll length: 50m

Thickness: 0.35mm

Color: Black

Characteristics: see Table below.

Accessories selector

		EFFISUS 2ADJOIN DF (double side tape)	EFFISUS ADJOIN TI (single side)	EFFISUS BONDING KF (sealant)	EFFISUS 2BOND DS (double side tape)
Membrane Fixing / Positioning	Concrete or similar porous surfaces			*	*
	Aluminium Foil (insulation)	*		*	*
	Gypsum Sheathing Board, Calcium Silicate Boards, Cement Basis or similar	*		*	*
Membrane Overlaps		*	*	*	
Perimeter Sealing	Concrete or similar porous surfaces			*	*
	Aluminium		*	*	*
	Gypsum Sheathing Board, Calcium Silicate Boards, Cement Basis or similar		*	*	*
	Interface membranes			*	*
Perforations Sealing	Pipes		*		
	Electrical cables		*		
	Nail/screw		*		*

* Preferred Use

4. Accessories

The Effisus Breather FR-B ST System includes accessories that are designed specifically to simplify the application of the membrane.

4.1 Adhesive Tapes

Adhesive tape for a moisture proof sealing of Effisus Breather FR-B ST Membrane overlaps, perforations and perimeter sealing.

4.1.1. Effisus 2Bond DS Tape (perimeter and perforations sealing)

Effisus 2Bond DS is the most efficient solution for sealing two surfaces of the same or different materials, and for sealing any nail/screw penetrations. Effisus 2Bond DS tape is a double-sided adhesive tape, devised using advanced technology with active adhesive sealants. Designed using a chemical arrangement of thermoplastics and non-curing rubber (non-butyl) with an incorporated primer. Effisus 2Bond DS is thoroughly elastic and flexible within a temperature range of 93°C to -57°C.



With a highly advanced micro sealant and removable siliconized release liner on each side, 2Bond DS Tape is designed to seal Effisus Breather FR-B ST perforations, creating a tight, permanent and waterproof membrane.

Roll width: 25mm.

Roll length: 15.25m.

Colour: Grey.

4.1.2. Effisus Adjoin TI Tape (membrane overlaps and perimeter sealing)

Effisus Adjoin TI Tape is a flexible multi-purpose adhesive tape for airtight bonds, indoors and outdoors, in accordance with DIN 4108, SAI 180 and ÖNorm B8110-2. It is used to form a secure and permanent seal of overlaps between foil and fleece membranes and joints between Effisus Breather FR-B ST membrane and smooth, non-mineral surfaces.



Effisus Adjoin TI Tape is also suitable for sealing joints between wood-based panels such as OSB or MDF subroof panels or wood-fiber softboards (eg., Gutex). Bonds overlaps between sheets of vapour check and joints between wood-based panels (such as OSB) also seals service penetrations. Suitable for windows, doors, planed timber, corners and roof windows.

Offers high protection against piercing in corners due to its high elasticity.

With release paper.

Easy to tear by hand.

Roll width: 60mm.

Roll length: 30m.

Colour: Black.

4.1.3 Effisus 2Adjoin DF Tape (membrane positioning)

Effisus 2Adjoin DF is a double-sided, airtight, water and moisture-resistant sealing tape, suitable for fixing Effisus membranes, PE/PA/PP and aluminum foils to metal studs. It is suitable for windtight and water/moisture-proof sealing of external membranes, as well as for rain-proof taping of roof underlay. It is quick and easy to apply using the Effisus 2Adjoin DF Hand Dispenser.



Compatible substrates

Designed for fixing internal membranes to metal sections in dry construction and the fixture of external membranes to hard-based panels (OSB, plywood panels, sheathing boards, gypsum board or the like), hard plastics and window frames.

All other materials in contact with Effisus products should be submitted for further technical evaluation and compatibility.

Roll width: 25mm.

Roll length: 20m.

Colour: Colourless with a polypropylene reinforcement.

5. Paste Adhesive

Paste adhesive for moisture and air proof sealing of Effisus Breather FR-B ST Membranes edges.

The paste adhesive are suitable for bonding Effisus Breather FR-B ST Membrane to smooth, non-porous and porous substrates, being used for the perimeter sealing and fixing it to the substrate.



5.1 Effisus Bonding KF Adhesive (fixing to substrate and perimeter sealing)

Effisus Bonding KF adhesive is suitable for all conventional building surfaces, such as concrete or metal. With exceptional bonding strength it is especially suitable for rough, uneven surfaces. With the Effisus Bonding KF adhesive, installation can be carried out at temperatures down to -10°C and up to $+35^{\circ}\text{C}$, even on moist (absorbent) surfaces in combination with Effisus Coat NP Primer.

It resists temperatures from -40°C to $+90^{\circ}\text{C}$, remaining permanently flexible. With waterproofing properties, it does not require additional sealants.

Compatible substrates: All conventional building surfaces as well as PVC, aluminium, wooden windows and for adhering sealing sheets together.

Package: 600ml sausage

6. Accessories: Others

6.1. Effisus Coat NP Primer

Primer to prepare surfaces before bonding Effisus Breather FR-B ST membrane. The primer should be used for surface treatment before applying Effisus 2Bond DS tape and Effisus Bonding KF:

- when applying on moist porous substrates;
- within a temperature range of -10 °C to 5 °C.

Package: 4.5 Kg



6.2. Effisus Cleaner LV

Effisus Cleaner LV is a ready-to-use solvent-based cleaning liquid and is used for cleaning and degreasing surfaces. It is compatible with all the products that constitute the Effisus waterproofing system.



7. Production, marketing and technical solution

Effisus supplies Effisus Breather FR-B ST Membranes and accessories.

Testing of all our manufactured goods is carried out and continuously recorded under industry-standard laboratory conditions, with the additional guarantee of periodic external inspections.

8. Installation Instructions

8.1. General Guidelines

It is the end user's responsibility to ensure the quality of installation by following the installation instructions in this document and by periodically checking the installed materials. Effisus is always available, upon request, to train staff.

8.2. Storage

Effisus Breather FR-B ST Membrane and system accessories should be stored on a hard, clean and dedicated stand, in a place that can protect them from extreme weather conditions or the risk of puncture. Materials should be kept within a temperature range of 5°C to 20°C.

Rolls should be stored flat on their sides, on a smooth, clean, dry surface, under cover, protected from sunlight and extreme weather conditions or the risk of puncture.

8.3. Installation Conditions

- Effisus Breather FR-B ST Membrane should be carefully transported and applied, to avoid sharp substrate edges, dust and debris contamination and the risk of tearing or loss of integrity.
- Bonding should be carried out on clean, dry, grease and dust-free supports.
- Surface preparation:
- Before applying any Effisus Breather FR-B ST System accessories, surfaces must be thoroughly cleaned using Effisus Cleaner LV. The substrate should also be degreased completely.
- A primer should be used for surface preparation and treatment of porous surfaces, or application within a temperature range of - 10°C to 5°C to improve surface adhesion of the Effisus membrane system. Allow the primer to dry to the touch (no material transfer). Dry time will vary depending on ambient temperature and humidity (typically less than 20 minutes).
- Effisus Breather FR-B ST Membrane should always be applied to a high density, rigid substrate or mineral wool (or similar), minimizing insufficient cohesion to the substrate.
- Effisus Breather FR-B ST Membrane should not be tensioned.
- Effisus Breather FR-B ST Membrane should be applied using the accessories recommended in this document.
- In case of precipitation (rain, snow, dense fog or any risk of condensation), application of the adhesive/sealant must be suspended.
- After installation, the Effisus Breather FR-B ST Membrane should not have any loose ends exposed to wind or work done by other contractors, and should be protected with protective boards, insulation or metallic sheeting.
- All other materials in contact with Effisus products should be submitted for further technical evaluation and tested for compatibility.

Note: The black/printed side of the membrane should face the installer.

8.4. Effisus Breather FR-B ST Membrane Fixing



Figure 2 - Effisus Breather FR-B ST System.

8.4.1. Fixing membrane to the substrate

Effisus Breather FR-B ST Membrane should be fixed to the smooth substrate using Effisus 2Adjoin DF tape with a maximum spacing between lines of 500mm/500mm. To apply the membrane to porous substrate it should be used Effisus 2Bond DS tape with a maximum spacing between lines of 500mm/500mm.

After applying the Effisus Breather FR-B ST Membrane over the surface, apply pressure over the whole bonding area using a silicone roll.

If the membrane is applied on the sheathing board and immediately covered by the insulation (see Figure 1), the Effisus Breather FR-B membrane does not need to be mechanically fixed.

Check Selector Table for alternative accessories.

8.4.2. Overlapping Joints

Upper layers should always overlap lower layers to facilitate the runoff of rainwater and to avoid water accumulation at the overlap joints.

- Horizontal joints should overlap by 100mm minimum.
- Vertical joints should overlap by 150mm minimum and be staggered or offset wherever possible(see Figure 3).

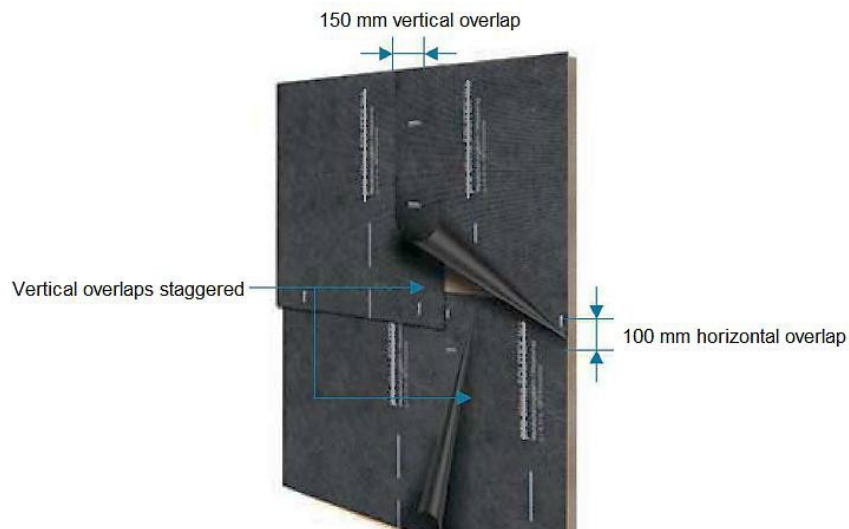


Figure 3 - Effisus Breather FR-B ST Membrane – Overlapping Joints.

Joints should be sealed with 1 band of Effisus Adjoin TI Tape, applied in the exterior side of the joint and covering both coated sides of the Breather FR-B ST layers.

Check Selector Table for alternative accessories.

8.4.3. Perimeter sealing

Effisus Breather FR-B ST Membrane should be sealed continuously around the membrane perimeter and in all locations interrupting the continuity of the membrane, such as window frames, doors, perforations or the like, using a band of Effisus 2Bond DS or an 8mm-diameter bead of Effisus Bonding KF paste adhesive.

If there is any risk of sliding or stress to the membrane, this should be mechanically fixed around the its edges.

Check Selector Table for alternative accessories.

For more information about this accessory and its compatibility with other materials see 4.1.

9. Perforations sealing

9.1. Effisus 2Bond DS Tape

All nail/screw perforations <25mm in diameter should be sealed with a 50mm x 50mm patch of Effisus 2Bond DS Tape, a double-sided adhesive/sealant tape (thickness > 1,50mm). Irregularly shaped façade perforations over 25mm in diameter should be studied in detail on a case-by-case basis by the Effisus Technical Department.

When Effisus 2Bond DS Tape is not used on insulation perforations (e.g. insulation mushroom washers or insulation pinholes), the head/top of these elements should be fully sealed with Adjoin TI Tape.

To seal cables, pipes and other perforations, Effisus has a variety of solutions that can be used to seal them. For projects with high requirements or unusual shapes, Effisus developed customized solutions capable of accommodating the most difficult perforations in any type of project.

Note: For more information about this Effisus Solutions please contact Effisus Technical Department.

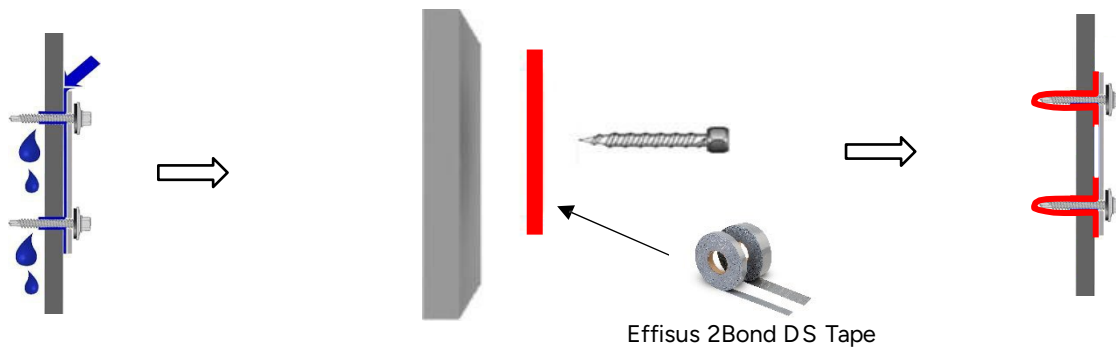


Figure 4 - Nails/screw perforations membrane sealing.

9.2. Effisus Adjoin TI Tape

To seal service penetrations and cladding fixing elements it should be used Effisus Adjoin TI tape. The application of the Effisus Adjoin TI tape should follow the recommendations below on Figure 5.

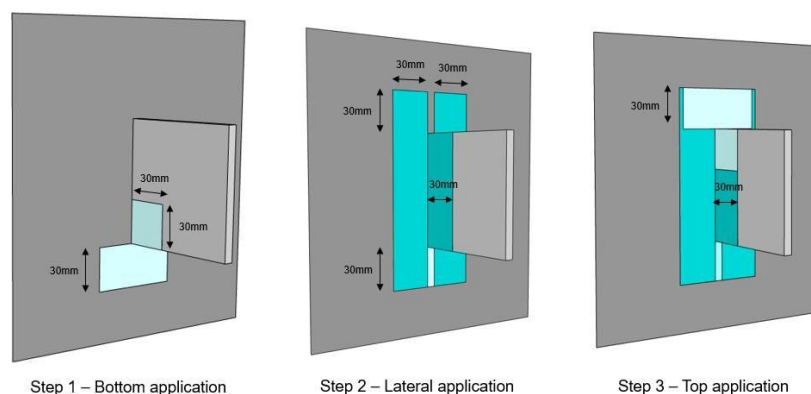


Figure 5 – Sealing service penetrations and cladding fixing perforations.

10. Bond between Effisus Breather FR-B ST Membrane – Effisus ProFlex FR Membrane

Bonds between an Effisus Breather FR-B ST Membrane and an Effisus ProFlex FR Membrane should be made using an 8mm-diameter bead of Effisus Bonding KF Adhesive or a band of Effisus 2Bond DS.

11. Bond between Effisus Breather FR-B ST membrane – Effisus Ecofacade membrane

Bonds between an Effisus Breather FR-B ST Membrane and an Effisus Ecofacade (EPDM) Membrane should be made using an 8mm-diameter bead of Effisus Bonding KF adhesive or a band of Effisus 2Bond DS.

12. Repairs

In case of puncture to the membrane, sealing of the damaged area is essential, using a patch of Effisus Breather FR-B ST Membrane with a compatible sealant accessory – See Figure 4.

1 – Cut a Patch of Effisus Breather FR-B ST at least 100mm larger than the tear to the Effisus Breather FR-B ST (in every direction).

2 – Apply a band 60 mm-wide of Effisus Adjoin TI Tape on the perimeter of the membrane patch. Alternatively, 2 beads of Effisus Bonding KF paste adhesive can be applied, with a distance of ≈ 25 and 50mm from the patch edge.

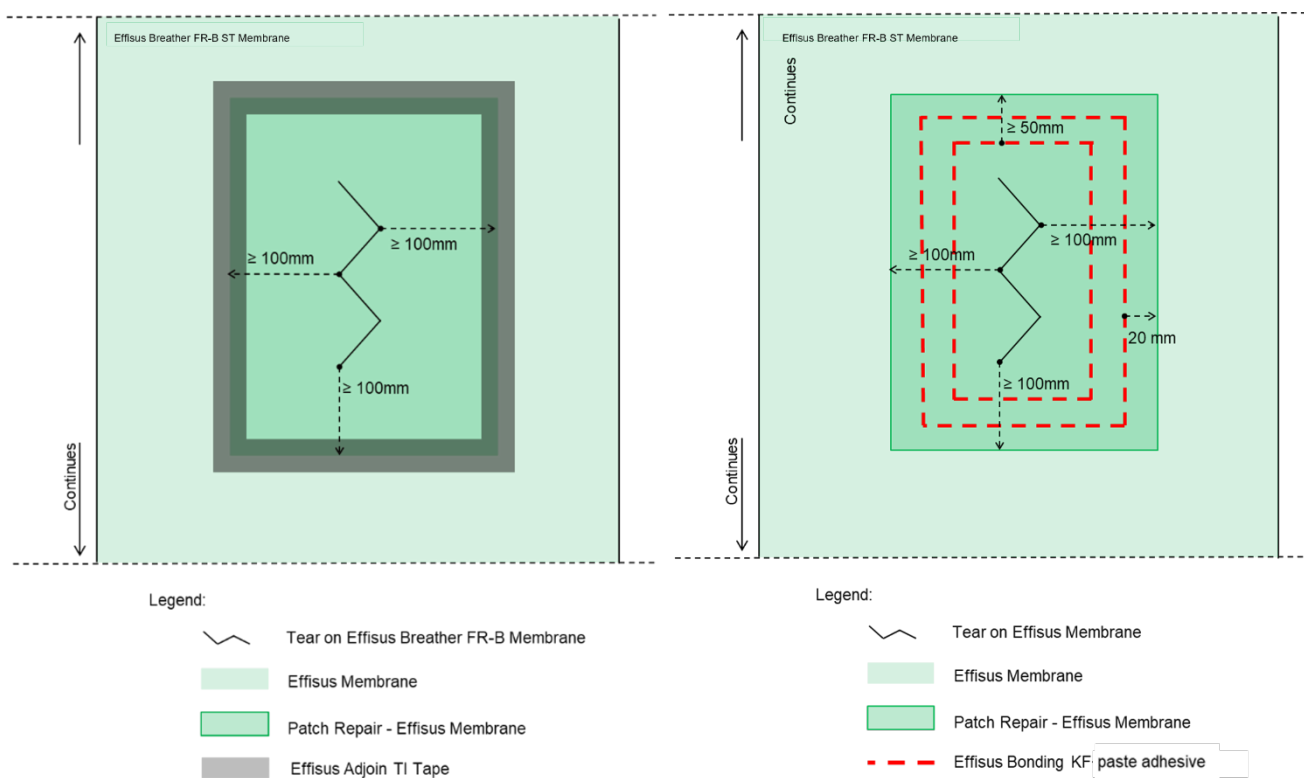


Figure 4 - Effisus Breather FR-B ST Membrane - Repairs (2 options).

Any repairing should be made using Effisus Breather FR-B ST Membranes and accessories, under approval from Effisus.

Effisus Breather FR-B ST Membranes are compatible with most common building materials. However, if in doubt, check the Effisus Technical Data Sheet and contact the Effisus Technical Department.

Whenever Effisus Breather FR-B ST Membranes are to be used in vigorous work environments (workshops, laboratories, etc.) Effisus must be consulted.

13. Accessories Consumption

Accessories Consumption				
Product	Colour	Delivery	Consumption	Storage
Effisus Coat NP Primer	Black	4,5kg Can	At 5cm application width: 10-15g/m, depending on substrate	Cool, dry, frost-proof, protect from direct sunlight. Keep container tightly closed.
Effisus Cleaner LV	Clear	1l Can	35m ² /litre	Cool, dry, frost-proof, protect from direct sunlight. Keep container tightly closed.
Effisus Bonding KF Adhesive	Black	600 ml Sausage	7m/unit (Ø8mm bead)	In original containers, cool, dry, frost-proof, protect from direct sunlight.

14. Test Results and Certification

Technical details are presented in this document.

Effisus Breather FR-B ST membrane has CE certification and DoP based on EN 13859 -2: Flexible sheets for waterproofing. Definitions and characteristics of underlays. Underlays for walls and EN 13859-1: Flexible sheets for waterproofing - Definitions and characteristics of underlays - Part 1: Underlays for discontinuous roofing.

Effisus Breather FR-B ST obtained class B-s1,d0 on Test Standard EN13501-1.

For further information contact Effisus.