

# Effisus EPDM ConnectionSeal

## 1. Summary

Effisus EPDM ConnectionSeal Membrane is a high-performance, durable sealing solution developed for façade and cladding systems. It is perfect for controlling water, air, and vapour in the most critical areas of the building envelope. Ideal for sealing interfaces around windows, doors, curtain walls, and other façade penetrations. It ensures long-lasting protection and helps prevent leaks, air infiltration, and moisture-related issues.

The membrane is made from an inert material with minimal environmental impact, releasing no toxic substances and supporting the safe collection of rainwater.

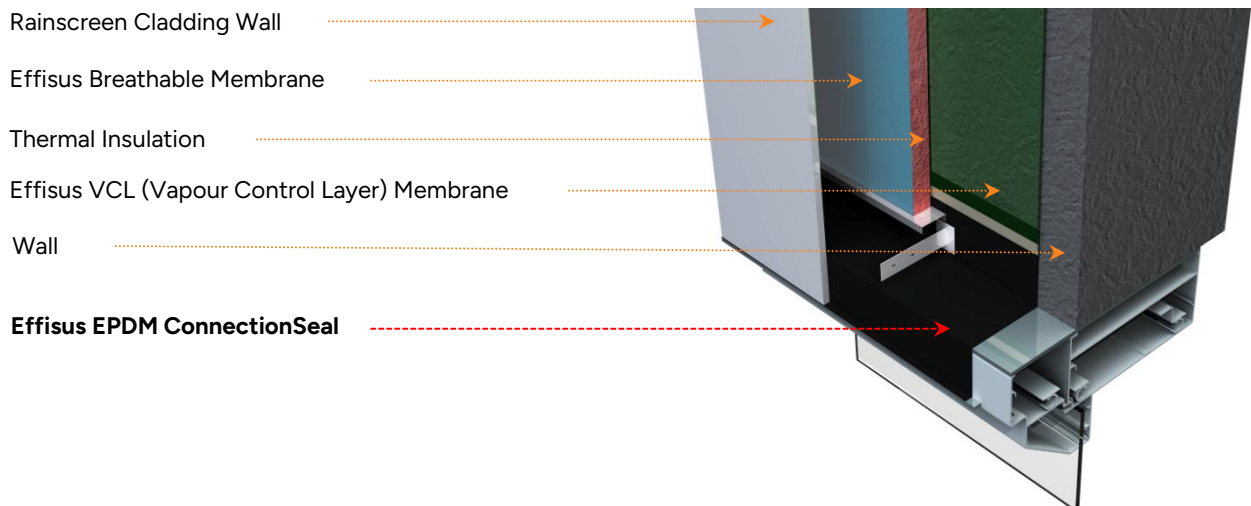


Figure 1 - Effisus EPDM Connection Seal System

## 2. Scope of Usage

In General: Interfaces and construction joints.

## 3. Presentation and Product Details

### 3.1 Effisus ProFlex FR Membrane

Thickness: 0.75mm

Length: 20m

Colour: Black

Characteristics: see the table below.

Technical Data	Standard	Result
Thickness	BS EN 1849-2	0.75 mm
Length	-	20 m
Width	-	1.50 m
Mass per unit area	BS EN 1849-2	0.96 Kg/m <sup>2</sup>
Sd-value (m)	BS EN 1931	73.6 m
Reaction to Fire - Membrane	EN 13501-1	Class E
Resistance to water penetration	EN 1928	W1, pass
Tensile Strength MD/CD	EN 12311-1	≥ 7.0 N/mm <sup>2</sup>
Elongation MD/CD	EN 12311-1	≥ 300%
Tear Resistance MD/CD	BS EN 12310-1	≥ 50/86 N
Resistance to impact	EN 12691	≤ 150mm
Resistance to alkali	EN 1847	Pass
Artificial ageing by long term exposure	EN 1296 / EN 1931	Pass

#### 4. Accessories

The Effisus EPDM ConnectionSeal System includes accessories that are designed specifically to simplify the application of the membrane.

Connections with other non-proprietary membranes (Vapor permeable membranes, air and vapor control layers, etc.) should be adequately designed to ensure optimum compatibility. All other materials in contact with Effisus products should be submitted for further technical evaluation and tested for compatibility.

##### 4.1 Adhesive Tapes

The Effisus EPDM ConnectionSeal Membrane comes with a few accessories specifically designed to facilitate the application of the membrane.

###### 4.1.1 Effisus 2Adjoin DF Tape

Effisus 2Adjoin DF is a double-sided, airtight, water and moisture-resistant sealing tape, suitable for fixing Effisus membranes, PE/PA/PP and aluminium 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.

#### 4.1.2 Effisus 2Bond GO Tape

Effisus 2Bond GO tape is the efficient and sustainable solution for sealing multiple situations, in day-to-day building or rehabilitation works. It promotes the protection of constructive materials, towards condensation and leaks, whilst also improving the energy efficiency of systems and solutions. It adheres perfectly to vapour barriers, weatherproofing membranes, and most remaining construction materials.



##### Compatible substrates

Glass, metals, wood, rigid PVC, ceramic, plastics, aluminium-coated insulation boards, EPDM Membranes, breathable membranes and vapour barriers.

Roll width: 20mm or 40mm.

Roll length: 30m.

Colour: Black.

#### 4.1.3 Effisus 2Bond DS Tape

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, Effisus 2Bond DS tape is designed to seal Effisus EPDM ConnectionSeal onto building perimeters and connections to smooth, non-porous or porous substrates, creating a tight, permanent and waterproof membrane. It is quick and easy to apply on smooth surfaces using Effisus Cleaner LV or any non-residue cleaner.

##### Compatible substrates

2Bond DS is fit for use on a wide range of construction substrates, both porous and non-porous, including concrete, cement particle sheathing boards, glass fibre and gypsum, masonry, brick, ceramic, metal, galvanized steel, coated and non-coated aluminium, polycarbonate, glass, natural stone, gypsum and OSB boards, wood, fiberglass, EPDM, SBS, modified APP, PP, PE and polystyrene etc. Connections with other non-proprietary membranes (Breather, EPDM, etc.) should be adequately designed to ensure optimum compatibility. All other materials in contact with Effisus products should be submitted for further technical evaluation and tested for compatibility.

Roll width: 25mm or 50 mm.

Roll length: 15.25m.

Colour: Grey.

### 4.2 Effisus Bonding Adhesive Sealants

#### 4.2.1 Effisus Bonding KF Adhesive

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  $-10^{\circ}\text{C}$  and up to  $+35^{\circ}\text{C}$ , even on moist (absorbent) surfaces in combination with Effisus Coat NP Primer.

It resists to temperatures from  $-40^{\circ}\text{C}$  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.

### **4.2.2 Effisus Bonding KFP Adhesive**

Effisus Bonding KFP adhesive brings together on a single adhesive exceptional property of adhesiveness, waterproofing and UV resistance, allowing total freedom of work. With exceptional bonding strength it is especially suitable for rough, uneven surfaces. Waterproofing and UV resistant, with the Effisus Bonding KFP adhesive no additional sealing materials are required.



With the Effisus Bonding KFP adhesive, sealing can be carried out at temperatures down to  $-10^{\circ}\text{C}$  and on moist (absorbent) building surfaces using Effisus Coat NP Primer.

### Compatible substrates

Interface membranes, EPDM and butyl to concrete, masonry, wood, glass, aluminium, steel and bitumen or for lap joint connections.

Package: 600ml sausage.

## **4.3 Accessories: Others**

### **4.3.1 Effisus Coat NP Prime**

Primer to prepare surfaces before bonding Effisus EPDM ConnectionSeal membrane. The primer should be used for surface treatment before applying Effisus 2Bond DS tape or Effisus Bonding Adhesives:

- when applying on moist porous substrates;
- within a temperature range of  $-10^{\circ}\text{C}$  to  $5^{\circ}\text{C}$ .

Package: 4.5 Kg



### **4.3.2 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.



## 5. Production, marketing and technical solution

Effisus supplies Effisus EPDM ConnectionSeal membrane 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.

## 6. Installation Instructions

### 6.1 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 working staff.

#### 6.1.1 Storage

Effisus EPDM ConnectionSeal 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 - 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.

#### 6.1.2 Installation Conditions

- Effisus EPDM ConnectionSeal 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: Unstable or crumbling surfaces either need to be cleared of any loose particles or sanded and stabilized using Effisus Cleaner LV. It is always recommended before applying any Effisus EPDM ConnectionSeal system accessories that surfaces must be thoroughly cleaned using Effisus Clean 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 5°C - 10°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 EPDM ConnectionSeal membrane should always be applied to a high density, rigid substrate or mineral wool (or similar), minimizing insufficient cohesion to the substrate.
- Effisus EPDM ConnectionSeal membrane should not be tensioned.
- Effisus EPDM ConnectionSeal 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 EPDM ConnectionSeal 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.

## 6.2 Effisus EPDM ConnectionSeal Membrane Fixing

### 6.2.1 Fixing membrane to the substrate

#### 6.2.1.1 Effisus Bonding KF and KFP Adhesives

Effisus EPDM ConnectionSeal membrane should be fixed using an 8mm-diameter bead of Effisus Bonding KF or KFP adhesives, when pressure is applied, forms an adhesive surface approximately 4cm wide. The quantity of beads depends on the membrane width.

Effisus Bonding KF or KFP Adhesives	
Membrane width	Number of adhesive beads
100 – 250 mm	1
250 – 500 mm	1 – 2
500 – 1300 mm	2 – 3

\* Beads with 8 mm diameter to provide a bonding surface, after crushing, of  $\pm 40$  mm

After applying Effisus Bonding KF or KFP adhesive to the support, directly apply Effisus EPDM ConnectionSeal membrane to the surface and apply pressure over the whole bonding area with a steel roll. It is perfectly feasible to adjust the membrane's position.

Bonding strength will progressively increase during the following up to 15 days depending on temperature and humidity levels.

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

Check 6.2.3 for perimeter sealing of the membrane.

#### 6.2.1.2 Effisus 2Bond GO Tape (Alternative)

Effisus EPDM ConnectionSeal membrane can be fixed to smooth surfaces (for instance: aluminium, steel, sheathing board) using Effisus 2Bond GO tape. The quantity and width of bands depend on the membrane width:

- 150 mm membrane width: use 20 mm of Effisus 2Bond GO tape
- 200 to 400 mm membrane width: use 40 mm of Effisus 2Bond GO tape
- >400mm membrane width: details should be submitted for further technical evaluation and recommendations.

Over wet surfaces, the use of a Primer Effisus Coat NP will be required before bonding.

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

Check 6.2.3 for perimeter sealing of the membrane.

#### 6.2.1.3 Effisus 2Bond DS Tape (Alternative)

Effisus EPDM ConnectionSeal membrane can be fixed to smooth or porous using Effisus 2Bond DS tape. The quantity and width of bands depend on the membrane width:

- 200 mm membrane width: use 25 mm of Effisus 2Bond DS tape
- 250 to 400 mm membrane width: use 50 mm of Effisus 2Bond DS tape
- > 400mm membrane width: details should be submitted for further technical evaluation and recommendations.

Over wet surfaces, the use of a Primer Effisus Coat NP will be required before bonding.

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

Check 6.2.3 for perimeter sealing of the membrane.

### 6.2.2 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 2).

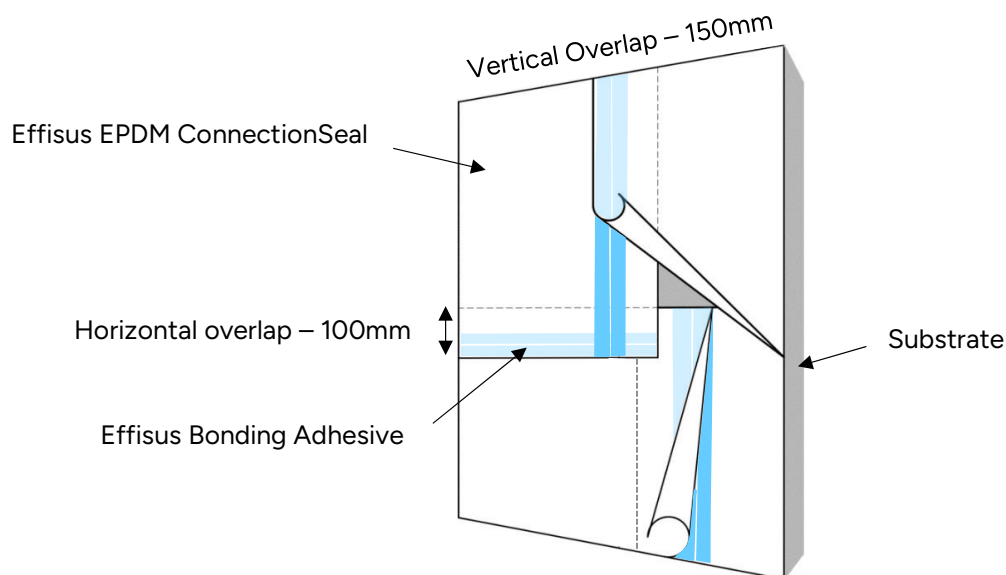


Figure 2 - Effisus EPDM ConnectionSeal Membrane – Overlapping Joints.

Check 6.2.3 for perimeter sealing of the membrane.

### 6.2.3 Perimeter sealing

#### 6.2.3.1 Effisus 2Bond DS Tape

Finish the application of the membrane system by applying an 8mm-diameter bead of Effisus Bonding KF or KFP adhesive to the entire perimeter of the Effisus EPDM ConnectionSeal membrane.

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



## 6.2.4 Perforations sealing

### 6.2.4.1 Nail/Screw perforations

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 facade perforations over 25mm in diameter should be studied in detail on a case-by-case basis by the Effisus Technical Department.

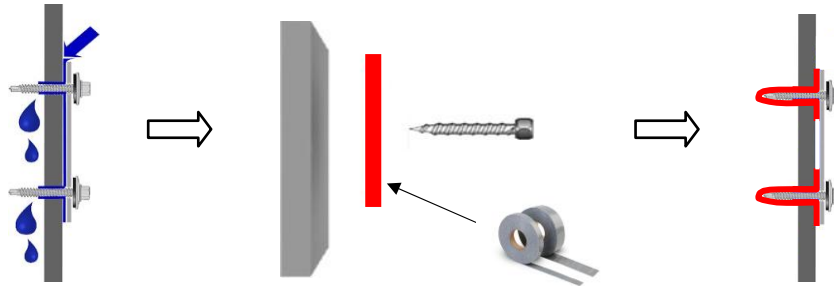


Figure 3 - Nails/screw perforations membrane sealing.

## 7. Repairs

In case of puncture to the membrane, sealing of the damaged area is essential, using a patch of Effisus EPDM ConnectionSeal membrane with a compatible sealant accessory. This patch should be at least a distance of 100mm in every direction from the location of the damaged Effisus EPDM ConnectionSeal membrane. Effisus Bonding KF or KFP adhesive should be applied at a distance of  $\approx$  50mm to 20mm from the patch edges.

The repairing patch of Effisus EPDM ConnectionSeal should be adhered/sealed to the membrane using 2 beads 8mm- diameter with Effisus Bonding KF or KFP adhesive, see Figure 4.

1 – Cut a Patch of Effisus EPDM ConnectionSeal at least 100mm larger than the tear to the Effisus EPDM ConnectionSeal (in every direction).

2 – Apply 2 beads 8mm-diameter of Effisus Bonding KF or KFP to the Effisus EPDM ConnectionSeal

$\approx$ 50mm and 20mm from the membrane edge.

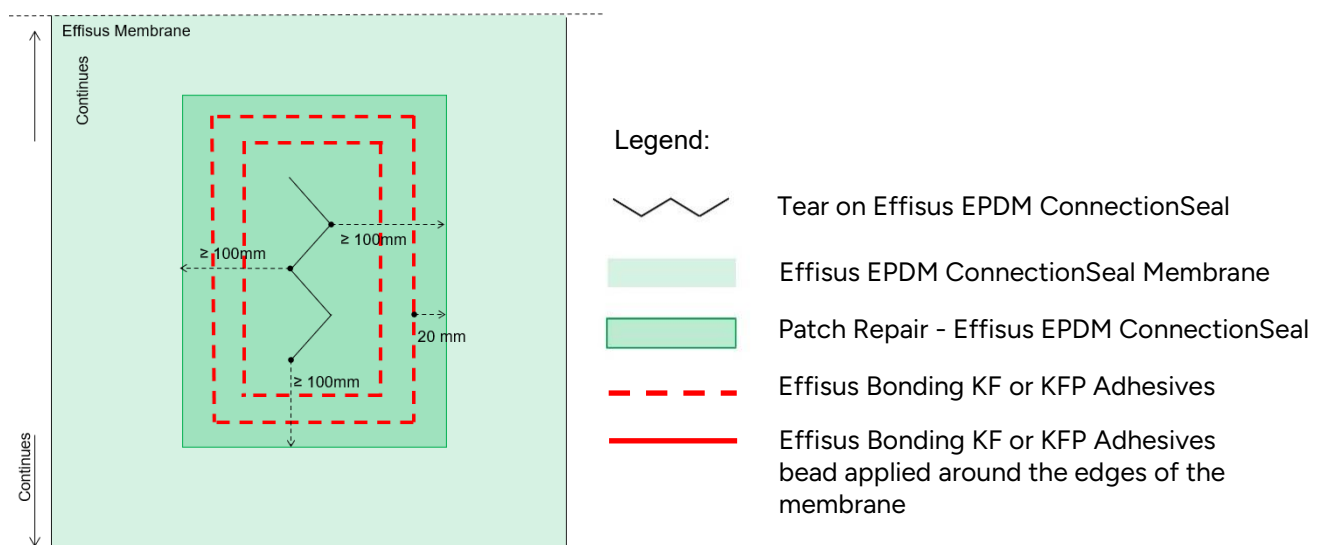


Figure 4 – Effisus EPDM ConnectionSeal Membrane - Repairs



## 8. Compatibility

Effisus EPDM ConnectionSeal Membrane are compatible with all traditional building materials. However, if in doubt, carry out a compatibility test and consult Effisus Technical Department.

Whenever Effisus EPDM ConnectionSeal Membrane are to be used in vigorous work environments (workshops, laboratories, etc.) Effisus Technical Department must be consulted.

## 9. 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 <sup>2</sup> /litre	Cool, dry, frost-proof, protect from direct sunlight. Keep container tightly closed.
Effisus Bonding KF or KFP Adhesives	Black	600ml Sausage	At a bonding width of 8cm approx. 100g/m, 600ml allow for a 7m bond with a width of 8cm	In original containers, within a temperature range of 15°C and 35°C for not more than 12 months.

## 10. Test Results and Certification

The technical details are presented in this document. Results from detaching tests will be made available upon request.

All the details presented were obtained from internal and external laboratories.

Effisus EPMD ConnectionSeal Membrane obtained CE marking based on EN 13984.

For further information contact Effisus.