

# SELFTENE BV HE

VAPOUR BARRIER MEMBRANE IN POLYMER DISTILLED BITUMEN

• SELFTENE BV HE BIADESIVO POLYESTER

• SELFTENE BV HE BIADESIVO ALU POLYESTER:

WITH SELF-ADHESIVE FACING ON BOTH SIDES FOR COLD-BONDING OF THE MEMBRANE TO THE LAYING SURFACE AND OF THE INSULATING PANELS TO THE MEMBRANE.

• SELFTENE BV HE MONOADESIVO ALU POLYESTER

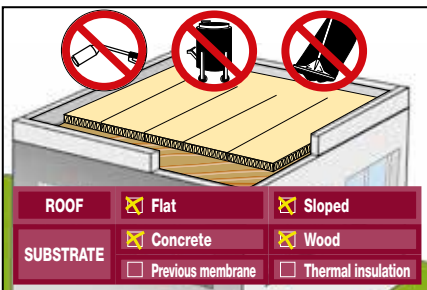
• SELFTENE BV HE MONOADESIVO ALU/TV:

WITH LOWER FACE SELF-ADHESIVE FOR COLD-BONDING OF THE MEMBRANE TO THE TIMBER BOARD

GRANTS **LEED** CREDITS

CATEGORY	CHARACTERISTICS					ENVIRONMENTAL						METHOD OF USE	
<b>HE S</b>													
SPECIAL ELASTOMERIC FOR SPECIFIC USES	WATERPROOF	VAPOUR BARRIER	SUPER-ADHESIVE	REACTION TO FIRE	ECO GREEN	ASBESTOS FREE	TAR FREE	CHLORINE FREE	RECYCLABLE	NON DANGEROUS WASTE	EXHAUSTED OIL FREE	INDIRECT HEAT APPLICATION	NAILING

## 1 PROBLEM



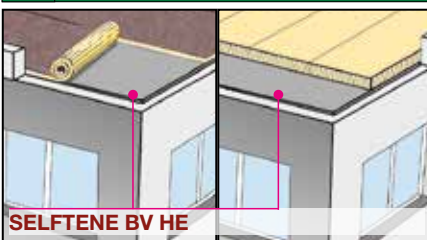
## A - HOW TO BOND THE VAPOUR BARRIER AND THE INSULATING PANELS ONTO THE VAPOUR BARRIER WITHOUT USING MELTED BITUMEN, HARMFUL ADHESIVES OR FLAMES

In urban areas where the use of the flame, the smoke emitted by the oxidized bitumen boiler or the harmful fumes of the adhesives used to bond the insulating panels can create problems: on easily combustible surfaces of buildings of great historical/artistic interest; in areas at high risk of fire or explosion; on roofs with difficult access where it is important to reduce transport of materials to a minimum.

## B - HOW TO BOND THE VAPOUR BARRIER ONTO TIMBER BOARDS WITHOUT USING MELTED BITUMEN, HARMFUL ADHESIVES OR FLAMES

To avoid the risk of fire, wooden surfaces must be prepared with nailed bituminous sheets or strips, onto which the vapour barrier is flame-bonded.

## 2 SOLUTION



**A - SELFTENE BV HE BIADESIVO** is the self-adhesive vapour barrier membrane onto which the insulating panels can be glued by simple cold pressure without using other materials. Hot bitumen, adhesives or flames are no longer used. Simply remove the silicone-coated film protecting the upper face of the membrane and press the insulating panel onto it. Bags of bitumen and buckets of adhesive no longer have to be transported up to the roof. The adhesive is already incorporated into the vapour barrier sheet, which performs the double function of protecting the panel from the moisture coming from inside the building and of bonding connecting element for the panel.

Using **SELFTENE BV HE BIADESIVO** makes it possible to use heat-sensitive insulating panels such as expanded polystyrene, both sintered and extruded. It reduces the need for materials on the roof and reduces laying time, as the vapour barrier and the adhesive for the panel are laid in a single operation. Laying is safe, and the risk of burns caused by pouring buckets of melted bitumen is eliminated. The product consists of a polymer distilled bitumen membrane with both faces hot-spread with a special

elastomeric mixture which adheres at ambient temperature. It retains its adhesive properties at low temperatures and remains active even for long periods of storage.

Different types are produced to meet various requirements.

**SELFTENE BV HE BIADESIVO ALU POLYESTER** is the elastomeric polymer distilled bitumen vapour barrier membrane with high resistance to water vapour migration for roofs over high humidity spaces (RH at 20°C ≥ 80%). Reinforced with aluminium combined with polyester non-woven fabric composite stabilized with glass fibre and both faces totally spread with self-adhesive mixture protected on both sides with a siliconized film and provided on one edge with a strip of the same film to facilitate the operation of sealing the overlap.

**SELFTENE BV HE BIADESIVO POLYESTER** is the elastomeric polymer distilled bitumen vapour barrier membrane reinforced with polyester non-woven fabric composite stabilized with glass fibre for roofs over medium humidity spaces (RH at 20°C ≤ 80%) with both faces completely spread with self-adhesive mixture. Both sides are protected with a siliconized film and an overlap strip is coated with a band of the same bisiliconized film to facilitate the operation of sealing it.

The polyester reinforcement ensures superior

## ADVANTAGES

- Saving on the cost of adhesive and the associated costs of transport and application.
- Reduction in the risk of fire and burns.
- Reduction in the fumes of hot bitumen and harmful emissions from the adhesives.

**CE**

**INTENDED USE OF "CE" MARKING SPECIFIED ACCORDING TO THE AISPEC-MBP GUIDELINES**

**EN 13970 - BITUMINOUS LAYERS FOR VAPOUR CONTROL**

- SELFTENE BV HE BIADESIVO ALU POLYESTER
- SELFTENE BV HE BIADESIVO POLYESTER
- SELFTENE BV HE MONOADESIVO ALU POLIEST.
- SELFTENE BV HE MONOADESIVO ALU/TV

elasticity and mechanical strength for applications on deformable and stressed roofs such as those in trapezoidal sheets.

**B - SELFTENE BV HE MONOADESIVO ALU POLYESTER** is the mono adhesive version with high resistance to vapour migration in elastomeric polymer distilled bitumen membrane for roofs over high humidity spaces (RH at 20°C ≤ 80%) reinforced with aluminium sheet combined with polyester non-woven fabric composite stabilized with glass fibre with the lower face spread with self-adhesive mixture protected with a siliconized film and with the upper face coupled to a Flamina film provided with an overlap strip protected by a siliconized band to facilitate the operation of sealing the overlap.

**SELFTENE BV HE MONOADESIVO ALU/TV** is a 0.8 kg/m<sup>2</sup> mono adhesive elastomeric polymer distilled bitumen vapour barrier membrane with the upper face consisting of an aluminium film, thin but very strong because it is reinforced with glass fibre.

(See following)

(See previous)

## APPLICATION FIELDS

**SELFTENE BV HE BIADESIVO** is suitable for being used on timber surfaces fairly subject to fire risk, as are boards over a ventilated air-space or in repairs on old timber roofs.

The type to use will depend on the degree of humidity in the spaces below, type **ALU POLYESTER** should be used in the case of high humidity, i.e. given the superior mechanical strength and elasticity of the latter type, **ALU POLYESTER** will be preferable, and the **POLYESTER** type on surfaces subject to movement. The possibility of cold bonding expanded polystyrene panels on top of it makes using **SELFTENE BV HE BIADESIVO** convenient even on cement-based surfaces where there are no particular fireproofing requirements.

**SELFTENE BV HE MONOADESIVO ALU POLYESTER** is the vapour barrier which is used on timber boards below mechanically-fixed thermal insulation panels and makes it possible to avoid preparing the board with nailed sheets, thus saving the trouble of laying one layer. The membrane is also very useful as a vapour barrier in metal roofs.

**SELFTENE BV HE MONOADESIVO ALU/TV** is used as a vapour barrier for trapezoidal sheet roofs, both in the 1 m wide version, which is not damaged by foot traffic when it is glued onto the top of the sheets, and in the 20 cm wide version which is used to seal the overlap lines of the sheets by applying it so as to straddle the transverse joints between the sheets and to follow their profile, and along the longitudinal joints. To seal these joints it may be convenient, instead of inserting the adhesive strip in the valley of the sheet, to cover the area of the longitudinal joint with a support sheet or fill the valley with suitable expanded polystyrene profiles. **SELFTENE BV HE MONOADESIVO ALU/TV** in strips is particularly useful when there is a need to lay the ISOLGRECA insulating panel on roofs over high humidity spaces.

A further motive for using a self-adhesive vapour barrier is connected with the lower environmental impact of laying operations for this type of material; this is particularly strongly felt when the work is being carried out in a hospital zone or densely populated areas where there is a ban on the smoke from the bitumen boiler, the noxious fumes of the adhesives and even the noise of the propane gas burners.

Finally, the use of **SELFTENE BV HE MONOADESIVO** and **SELFTENE BV HE BIADESIVO**, together with the use of the membranes **SELFTENE BASE POLYESTER** and **MINERAL SELFTENE POLYESTER** make it possible to create layer structures complete with vapour barrier, waterproofing and thermal insulation, laid in situ, without using naked flames, thus making it possible to operate in industrial areas with a high risk of explosion and fire.

## METHOD OF USE AND PRECAUTIONS

When planning to use self-adhesive membranes, it should be borne in mind that compared with traditional flame bonding, cold laying requires greater attention to the nature and condition of the laying surfaces, bearing in mind that dust, damp and crumbling surfaces inhibit the adhesion of self-adhesive materials.

Attention should also be paid to weather conditions: low temperatures reduce the adhesion of the materials, while high temperatures soften the materials and make them more adhesive, thus slowing down laying operations. In low temperatures, passing over the adhesive surface with a gentle flame or with hot air quickly reactivates the adhesion of the materials, whereas in hot conditions it is important to remove the siliconized film only when you are sure that the sheets are properly aligned, as, once they are bonded it is difficult to separate and realign them.

In cold weather conditions moisture condenses on the laying surfaces and on the sheets themselves, inhibiting adhesion; the same applies to foggy weather conditions.

Below +5°C laying should either be suspended or carried out with the help of a flame.

**SELFTENE BV HE BIADESIVO** adheres to aluminium, copper, lead, steel and galvanised steel even without using any primer, as long as the panels are clean, dry and degreased; if it is thought that they may still be greasy, it is advisable to pre-paint them with a coat of INDEVER PRIMER E.

It adheres without primer even on industrial timber panels such as OSB and plywood, as long as they are clean and dry; the same applies to timber boards that are sufficiently dried and seasoned; if, however, they are green, it is advisable to use the same primer. When renovating of old timber surfaces they must always be painted with a coat of INDEVER PRIMER E; the same applies when laying on an old bituminous surface.

Concrete surfaces must be smoothed, otherwise the sheet will adhere only to the irregularities; they must always be treated with a coat of the same primer.

Rough surfaces at the crucial points of the roof, corners and vertical overlaps may be smoothed and HEADCOLL adhesive spread using a trowel.

Sintered expanded polystyrene panels and extruded expanded polystyrene panels may be bonded to **SELFTENE BV HE BIADESIVO**, as well as expanded polyurethane panels continuously laminated with bituminous felt paper and the corresponding versions in rolls pre-backed with membrane, such as THERMOBASE PSE, THERMOBASE PSE/E and THERMOBASE PUR with bituminous felt paper; the same applies to the ISOBASE, ISOINCLINED PSE and ISOPREF PSE versions.

It is not advisable to use insulation panels made of poorly cohering and crumbling insulating materials like mineral wool, perlite and cellulose fibre.

The first roll of **SELFTENE BV HE BIADESIVO** is unrolled and aligned on the surface to be coated; the sheet is then rolled up again from both ends until it ends up as two half-length rolls. The siliconized film coating the lower face is then cut across with the cutter and removed, simultaneously unrolling the first half-roll, making sure it is pressed down with the feet and/or with a metal roller. The same operation is

repeated for the second half-roll. Next, on the side protected by the siliconized overlap strip for the entire length of the sheet, the film covering the whole upper surface is removed, exposing the strip itself. By repeating the above operations, the second roll is unrolled parallel to the first, overlapping it by about 5 cm. The sheet must be parallel to the membrane laid alongside it but must be staggered by at least 1 m so as to avoid four sheets overlapping to form a cross. Overlaps must consist of a maximum of three sheets meeting to form a T.

At this point, by removing the strip from under the overlapping edge, the overlap between the two sheets can be sealed with the feet and/or a metal roller. At the end, the sheet must overlap the next sheet by at least 10 cm. Then on the sealed overlap, turn back the film on the upper face which had been moved sideways for temporary protection until the moment when it is removed when laying and bonding of the insulation panel are begun. To bond the insulation layer, remove the upper film as laying the panels proceeds, avoiding treading on and dirtying the exposed adhesive face; in order to facilitate adhesion of the panels, they must be carefully pressed onto the vapour barrier.

The methods of laying **SELFTENE BV HE MONOADESIVO ALU POLYESTER** and **SELFTENE BV HE MONOADESIVO ALU/TV** are simpler: after removing the siliconized film from the lower face and sealing the overlaps, it will be possible to proceed with laying the insulating panels which must be nailed to the board through the membrane.

# SELFTENE BV HE BIADESIVO (BIADHESIVE)

## TECHNICAL SPECIFICATIONS

	Standard	T	SELFTENE BV HE BIADESIVO ALU POLYESTER	SELFTENE BV HE BIADESIVO POLYESTER
Reinforcement			Polyester non-woven fabric composite stabilized with glass fibre + aluminium foil	Polyester non-woven fabric composite
Mass per unit area	EN 1849-1	±10%	3 kg/m <sup>2</sup>	3 kg/m <sup>2</sup>
Roll dimensions	EN 1848-1	-1%	1×10 m	1×10 m
Watertightness	EN 1928 – B	≥	60 kPa	60 kPa
Maximum lateral/end tensile force	EN 12311-1	-20%	250/120 N/50 mm	450/300 N/50 mm
Lateral/end tensile elongation	EN 12311-1	-15% P.V.	15/20%	40/40%
Dynamic puncture resistance	EN 12691 – A		NPD	700 mm
Lateral/end nail tear strength	EN 12310-1	-30%	100/100 N	150/150 N
Cold flexibility	EN 1109	≤	-25°C	-25°C
High temperature sliding resistance	EN 1110	≥	100°C	100°C
Permeability to water vapour • after ageing	EN 1931 EN 1296-1931	-20% -20%	μ = 1 500 000	μ = 100 000
Euroclass reaction to fire	EN 13501-1		E	E
External fire behaviour	EN 13501-5		F roof	F roof

Specific properties of resistance to wind lifting (EN 16002)

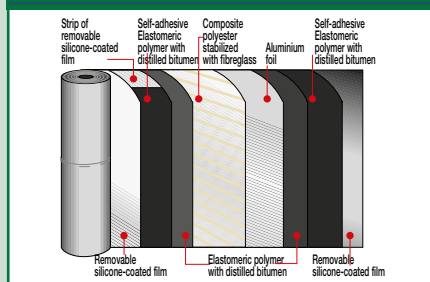
with expanded polystyrene ≥100	EN 16002		Δ <sub>adm</sub> = 6 000 N/m <sup>2</sup>	Δ <sub>adm</sub> = 6 000 N/m <sup>2</sup>
with extruded expanded polystyrene	EN 16002		Δ <sub>adm</sub> = 6 000 N/m <sup>2</sup>	Δ <sub>adm</sub> = 6 000 N/m <sup>2</sup>

Thermal characteristics

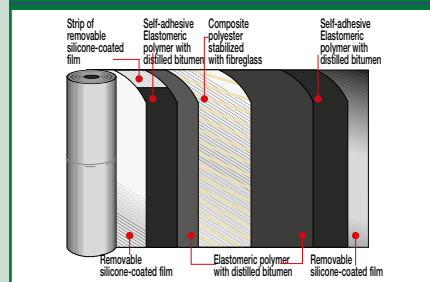
Thermal conductivity			0.2 W/mK	0.2 W/mK
Thermal capacity			3.90 KJ/K·m <sup>2</sup>	3.90 KJ/K·m <sup>2</sup>

## COMPOSITION OF THE MEMBRANE

### SELFTENE BV HE BIADESIVO ALU POLYESTER



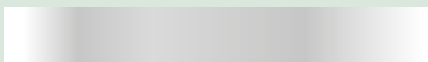
### SELFTENE BV HE BIADESIVO POLYESTER



## PRODUCT FINISHES



**"FLAMINA" PE FOIL.** Plastic protection film helping prevent coils from sticking to the roll. As it withdraws under the action of the flame right during its installation, it signals the best melting point in order to correctly glue the membrane to the brackets and rises. When not heated, it can be used as a sliding layer.



**REMOVABLE SILICONE-COATED FILM.** The lower face of the membrane is covered in a silicone-coated film which preserves the adhesive mix.

# SELFTENE BV HE MONOADESIVO (ADHESIVE)

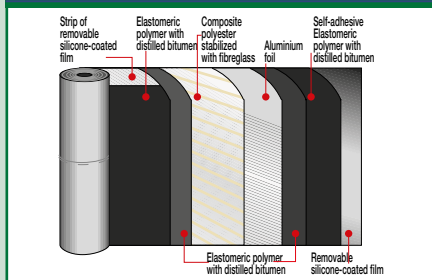
## TECHNICAL CHARACTERISTICS

	Standard	T	SELFTENE BV HE MONOADESIVO ALU POLYESTER	SELFTENE BV HE MONOADESIVO ALU/TV
Reinforcement			Polyester non-woven fabric composite stabilized with glass fibre + aluminium foil	Glass fabric composite combined with aluminium foil
Mass per unit area	EN 1849-1	±10%	3 kg/m <sup>2</sup>	0.8 kg/m <sup>2</sup>   0.8 kg/m <sup>2</sup>
Roll dimensions	EN 1848-1	-1%	1x10 m	1x30 m   0.20x30 m
Watertightness	EN 1928 - B	≥	60 kPa	60 kPa
Maximum lateral/end tensile force	EN 12311-1	-20%	250/120 N/50 mm	900/900 N/50 mm
Lateral/end tensile elongation	EN 12311-1	-15% P.V.	15/20%	4/4%
Dynamic puncture resistance	EN 12691 - A		NPD	NPD
Lateral/end nail tear strength	EN 12310-1	-30%	100/100 N	200/200 N
Cold flexibility	EN 1109	≤	-25°C	-25°C
High temperature sliding resistance	EN 1110	≥	100°C	100°C
Permeability to water vapour • after ageing	EN 1931 EN 1296-1931	-20% -20%	μ = 1 500 000	μ = 1 500 000
Euroclass reaction to fire	EN 13501-1		E	E
External fire behaviour	EN 13501-5		F roof	F roof
Specific properties of resistance to wind lifting (EN 16002)				
with expanded polystyrene ≥100	EN 16002		Depending on the number of fixings of the insulating panel	Depending on the number of fixings of the insulating panel
with extruded expanded polystyrene	EN 16002			
Thermal characteristics				
Thermal conductivity			0.2 W/mK	0.2 W/mK
Thermal capacity			3.90 KJ/K·m <sup>2</sup>	1.04 KJ/K·m <sup>2</sup>

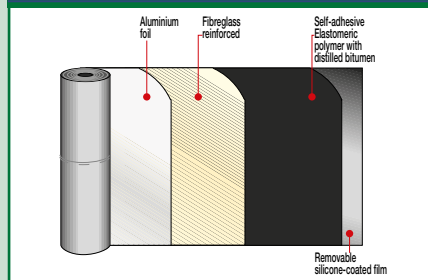
the numerous possible uses and the possible interference of conditions or elements beyond our control, we assume no responsibility regarding the results which are obtained. The purchasers, of their own accord and under their own responsibility, must establish the suitability of the product for the envisaged use.

## COMPOSITION OF THE MEMBRANE

### SELFTENE BV HE MONOADESIVO ALU POLYESTER



### SELFTENE BV HE MONOADESIVO ALU/TV



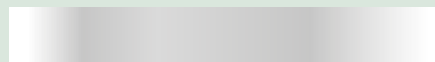
## PRODUCT FINISHING



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**ALLUMINIUM FILM.**



**REMOVABLE SILICONE-COATED FILM.** The lower face of the membrane is covered in a silicone-coated film which preserves the adhesive mix.

The figures shown are average indicative figures relevant to current production and may be changed or updated by INDEX at any time without previous warning. The advice and technical information provided, is what results from our best knowledge regarding the properties and the use of the product. Considering

• FOR ANY FURTHER INFORMATION OR ADVICE ON PARTICULAR APPLICATIONS, CONTACT OUR TECHNICAL OFFICE • IN ORDER TO CORRECTLY USE OUR PRODUCTS, REFER TO INDEX TECHNICAL SPECIFICATIONS •

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