

SOLAR VAPOUR BARRIER

Waterproofing composite self-adhesive membrane (APP)



DESCRIPTION

The bitumen-polymer SOLAR VAPOUR BARRIER membranes are the arrival point of the latest generation of membranes denominated "composite". These membranes are thus defined because thanks to a production technology, Nord Bitumi can produce materials with differentiated waterproofing mass, which allows the optimal use of each layers properties, satisfying the different requirements. SOLAR VAPOUR BARRIER are pre-fabricated waterproofing membrane, for specific use as a total barrier to the passage of vapour, with a continuous single strand composite woven non woven polyester reinforcement, with high mechanical characteristics and an aluminium film which allows to obtain a barrier to the transmission of vapour. The lower face of SOLAR VAPOUR BARRIER is protected with a removable silicon release film. The upper face is self-protected with micro mineral slates that offer good walkability and improve grip of TECA adhesives (Polyurethane Glue, Pratiko Mastic, Bit Adhesive, etc.) for the adhesion of insulating panels; furthermore a removable

side selvedge of 10 cm is foreseen. In the stratigraphy of the roof, SOLAR VAPOUR BARRIER must be applied under the insulating panel, in order to preserve the latter from the condensation phenomena of water vapor, which certainly occurs, as the roof operating conditions change.

FIELDS OF USE

The SOLAR VAPOUR BARRIER membranes are capable of resolving specific application and functional requirements and present numerous and important advantages, such as ease of application with consequential savings on time and the possibility to apply the material on surfaces which are not suitable to open flame. Therefore SOLAR VAPOUR BARRIER is insuperable in the waterproofing of wood structures, insulation panels which are heat sensitive, panel decks and refurbishment of historical roofs. Furthermore SOLAR VAPOUR BARRIER can be used and allows the waterproofing of particular roof details (ex. bandaging of plastic tubes, etc.) and the possibility to also apply with the traditional application method of open flame or hot air, obtaining an exceptional level of adhesion. SOLAR VAPOUR BARRIER guarantees a perfect level of adhesion to the application surface, providing the system with an excellent level of wind uplift resistance and allowing accidental infiltrations to be traced.

APPLICATION OF THE INSULATION

When choosing the method of fixing the insulation of the roof system, applied on top of the vapour barrier, the following factors must be considered:

- type of insulation (characteristics of stability, compression, etc.),
- compatibility between the fixing, the insulation and the waterproofing membrane,
- type of adhesive,
- the factor of possible wind uplift,
- the type of substrate.

Where application with mechanical fixing is required of the panels, these must be applied side by side making sure that they are also staggered and properly fixed to the SOLAR VAPOUR BARRIER with suitable fixings to the type of substrate and of the correct length based on the thickness, these should be at least 10 cm from the edges and along the diagonals. The total resistance of the fixing elements of the panel, to wind uplift (Wh), should in any case be superior to ≥ 400 N per fixing. For the application of the insulation it is suggested to follow the indications of the manufacturer and eventual indications in the specification.

Reinforcement: Single strand polyester + Aluminium film

Compound: Elasto-plastomer polymer bitumen (APP)

Top finish: Micro Mineral Slates *

Lower finish: Silicon release film

Intended use:

EN 13970 Vapour barrier

Application method: Self-adhesive / Mechanical fixing

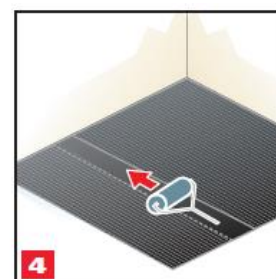
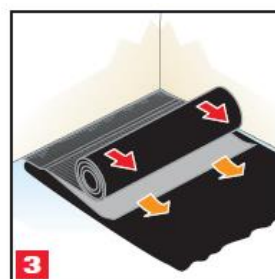
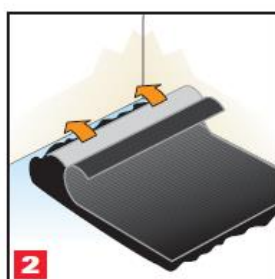
* Mineral self-protected products may undergo color tone variations due to the time and length of storage. Exposure to atmospheric conditions, after application, will tend to uniform the color after a few months. The change in color tone cannot therefore be contested and / or complained of as it is a natural phenomenon that the slate manufacturer himself cannot guarantee.

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APPLICATION

1. On cementitious surfaces and similar apply, by roller or airless, synthetic primer PRIMER SINT, approx. consumption 200-400 g/m². This application is not required on wooden roofs except OSB boards.
2. Position the SOLAR on the application surface; provide side & head laps respectively of 10 & 15 cm's between the sheets.
3. Remove the release film from the lower face, this is divided longitudinally in two sections, in one or two steps. It is always suggested to mechanically fix head & side laps.
4. Use suitable roller by applying pressure over all of the membrane surface, particularly the side & head laps to further promote adhesion.
5. Position suitable single or double battens for subsequent laying of the sealing element consisting of a discontinuous covering mantle (tiles, roof tiles, etc.) as required by the UNI 9460: 2008 standard - Discontinuous roofing for roofs.
6. In the event of high internal relative humidity, or the presence of humidity in the wooden deck application surface, to prevent the formation of condensation on the inner face of the adhesive membrane during the night, which may cause marks or stains over time in the ceiling of the rooms below, foresee the use of NORD BASE vapor separation and diffusion layer having a polypropylene film finish mechanically fixed to the support with broad-headed nails. The adhesive membrane is then applied over the vapor diffusion layer.



RECOMMENDATIONS

- ✓ The SOLAR membranes are to be applied on dry clean surfaces which must be treated with a synthetic primer, excluded are wooden roofs except OSB boards.
- ✓ Self-adhesive membranes must not be applied on sanded or talced underlays. The granulometry of these upper surfaces creates a detaching effect that prevents the self-adhering properties from achieving a fully bonded installation.
- ✓ The side & head laps must be respectively of 10 & 15 cm's.
- ✓ When applying on verticals, the apex of the membrane must be mechanically fixed with a proper flashing; where possible it is advisable to go up and over the vertical and on to the horizontal surface.
- ✓ Avoid storing the product on the roof with temperatures lower than +10°C or higher than +40°C if not for the time necessary for installation.
- ✓ With temperatures below +10°C it is necessary to apply the product using particular precautions:
 1. Store the rolls in an upright position in the original packaging, indoors and in dry and warm areas.
 2. Transport the rolls to the place of application only at the time of use.
 3. The ideal application occurs at temperatures above +10°C, however it is possible to apply the product below +5°C bringing the rolls to the ideal temperature with a leister or gas torch.
- ✓ **The application surface must not have any depressions to avoid the risk of ponding water, the slope must be at least 1.5% on concrete decks and 3% for steel or wooden ones, this to guarantee a proper run off of rainwater.**
- ✓ Program periodical roof inspections to remove debris, mud, plants, etc. and to keep under control the waterproofing as well as accessory details (drain outlets, TV antennas, air conditioning, etc.).
- ✓ In the eventuality in which the element to be waterproofed presents residual humidity (ex. refurbishment, application after heavy rains) it is necessary to foresee the use of air vents, which will be positioned in a way to allow for the evacuation of the humidity.
- ✓ Absolutely avoid the stacking of rolls and pallets for storage or transport to avoid possible deformations which may compromise a perfect installation. It is recommended to store the product at temperatures above 0°C.

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TECHNICAL SPECIFICATIONS

CHARACTERISTICS	TESTING METHOD	M.U.	TOLERANCE	VALUE
Adhesion of granules	EN 12039	%	MLV ≤	30
Length/Width	EN 1848-1	m	MLV ≥	15,00 / 1,0
Visible defects	EN 1850-1	visual		None
Mass	EN 1849-1	kg/m ²	MDV ±10%	2,5
Straightness	EN 1848-1	mm/10 m	MLV	< 20
Watertightness	EN 1928	kPa	MLV ≥	60
Watertightness after ageing	EN 1296	kPa	MLV ≥	60
External Fire Performance	EN 13501-5			F ROOF
Reaction to fire	EN 13501-1	class		NPD
Shear resistance L/T	EN 12317-1	N/50 mm	MDV -20% +50%	600/400
Maximum tensile strength (L/T)	EN 12311-1	N/50 mm	MDV -20% +50%	700/500
Maximum tensile strength after ageing (L/T)	EN 1296	N/50 mm	MDV -20% +50%	NPD/NPD
Elongation (L/T)	EN 12311-1	%	MDV -15 +30	35/35
Resistance to tearing (L/T)	EN 12310-1	N	MDV -20% +50%	150/150
Resistance to static loading	EN 12730-A	kg	MLV ≥	15
Resistance to impact	EN 12691-B	mm	MLV ≥	1000
Peel resistance of joints L/T	EN 12316-1	N/5 cm	MDV ±20N	NPD/NPD
Cold flexibility	EN 1109	°C	MLV ≤	-25
Cold flexibility after ageing	EN 1296	°C	MDV +15°C	-20
Flow resistance	EN 1110	°C	MLV ≥	90
Flow resistance after ageing	EN 1296	°C	MDV -10°C	80
Dimensional stability	EN 1107-1	%	MLV ≤	0,3
Root resistance	EN 13948			NPD
Water vapour permeability	EN 1931	μ	MLV ≥	1500000
Water vapour permeability after artificial ageing	EN 1296	μ	MLV ≥	NPD

NPD : No Performance Declared in accordance with the EU Construction Products Directive.

MDV : value declared by the manufacturer associated with a declared tolerance.

MLV : limit value, minimum or maximum, declared by the manufacturer

PACKAGING

PRODUCT	ROLL SIZE	WEIGHT KG/M ²	THICKNESS MM	SQUARE METRES PER PALLET
Solar Vapour Barrier	15 m x 1 m	2,5	-	375

The waterproofing membrane based on distilled bitumen and polymers, as shown in this data sheet does not require the issue of a MSDS, because it does not contain dangerous substances. The information data sheet for the proper use of products is available. The technical data given is based on average values obtained during production. We reserve the rights to change or modify the nominal values without prior notice or advice. The informations contained in this data sheet are based on our experience. We cannot take any responsibility for a possible incorrect use of the products. The customer has to choose under their own responsibility a product fit for the intended use.

26/02/2025 - This version supersedes all previous ones.