

# PLURA® ZEBRA VAPOUR BARRIER

Heat activated composite waterproofing membrane with functions of vapour barrier

## Description

Pre-fabricated composite waterproofing membrane. The compound is made of distilled bitumen and elastomers (SBS type), reinforced with fiberglass and aluminium metal sheet that allows to obtain a barrier against the passage of vapour. The PLURA ZEBRA VAPOUR BARRIER membrane on the exposed side features a series of stripes formed by a special heat activated compound, separated by fine sand, which ensures a strong and durable adhesion to the insulating panels. The advantages of the PLURA ZEBRA VAPOUR BARRIER are basically those aimed at avoiding the use of oxidized bitumen and cold bonding substances (mastic, polyurethane glues, etc.) for the application and adhesion of insulating panels. The hot oxidized bitumen, in addition to being extremely dangerous (burns, fumes, etc.), loses in little time its adhesive capacity, exposing the covering to the known dangers due to the strength of persisting wind action and the deformations of the roof covering. In addition, the stripes ensures perfect adhesion on the entire surface of the insulating panel. In case of application on roofs with slopes higher than 15% or in a particularly windy area, it is necessary to integrate the bonding with suitable mechanical fasteners and/or strips inside in the stratigraphy. Particularly suitable for high thickness panels and/or sloped.

## Application of insulation

After applying PLURA ZEBRA VAPOUR BARRIER, proceed with the application of insulating panels by torching the striped surface with a special propane or hot air gas burner.

The special strips made with heat-activated compound will guarantee good adhesion to the different types of insulating panels.

In case of integration of the insulating package with mechanical fixing, 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,
- the factor of possible wind uplift,
- the type of substrate.

## Stratigraphy



1. Silicon release film
2. Waterproofing compound
3. Fiberglass reinforcement
4. Aluminum sheet
5. Heat activated bitumen compound in stripes separated by fine sand



EN 13970

Where application of the panels with mechanical fixing is required, these must be applied side by side making sure that they are also staggered and properly fixed to the PLURA ZEBRA 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  $\geq 400$  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. For further information and indications it is recommended to consult PLUVITEC's technical literature.

## Fields of use



### EN13970 Vapour Barrier

| PLURA ZEBRA VAPOUR BARRIER V 3.5 MM | N° layers    |              |            | Method of application |         |                     |                |                   | Type of application             |              |                  | Type       |                     |           |                  |           |            |
|-------------------------------------|--------------|--------------|------------|-----------------------|---------|---------------------|----------------|-------------------|---------------------------------|--------------|------------------|------------|---------------------|-----------|------------------|-----------|------------|
|                                     | Single layer | Double layer | Multilayer | Torch                 | Hot Air | Mixed (Torch / Air) | Cold Bond Glue | Mechanical Fixing | Thermo Adhesive / Self Adhesive | Fully Bonded | Partially Bonded | Loose Laid | Complimentary Layer | Top Layer | Heavy Protection | Anti-root | Other Uses |
|                                     | ■            | ■            | ■          | ■                     |         |                     |                |                   | ■                               | ■            |                  | ■          |                     |           |                  |           |            |

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.

## Technical data

| Technical Characteristics   | Measure units | Reference norm | V                     | Tolerances |
|-----------------------------|---------------|----------------|-----------------------|------------|
| Type of reinforcement       |               |                | Fibreglass + Aluminum |            |
| Upper face finish           |               |                | PE film and fine sand |            |
| Lower face finish           |               |                | Silicon release film  |            |
| Length                      | m             | EN 1848-1      | 8 -1%                 | ≥          |
| Width                       | m             | EN 1848-1      | 1,08 -1%              | ≥          |
| Thickness                   | mm            | EN 1849-1      | 3,5 *                 | ±5%        |
| Flow resistance             | °C            | EN 1110        | 100                   | ≥          |
| Cold flexibility            | °C            | EN 1109        | NPD                   | ≤          |
| Tensile strength L / T      | N/5 cm        | EN 12311-1     | 450/350               | -20%       |
| Elongation at break L / T   | %             | EN 12311-1     | 2/2                   | -2         |
| Tearing resistance L / T    | N             | EN 12310-1     | 100/100               | -30%       |
| Dimensional stability       | %             | EN 1107-1      | NPD                   | ≤          |
| Static puncture resistance  | kg            | EN 12730       | 5                     |            |
| Dynamic puncture resistance | mm            | EN 12691-B     | 500                   |            |
| Fire resistance             |               | EN 13501-5     | F ROOF                |            |
| Fire reaction               |               | EN 13501-1     | F                     |            |
| Watertightness              | kPa           | EN 1928-B      | 60                    | ≥          |
| Water vapour permeability   | μ             | EN 1931        | 1500000               |            |

\* thickness measured on heat activated strip.

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

## Other performance data

| Technical Characteristics | Measure units |              |
|---------------------------|---------------|--------------|
| Specific heat             |               | 1.70 KJ/kg°K |
| Thermal conductivity      | λ             | 0.170 W/m°K  |

## Sizes & packing

| Description                                | V 3,5 mm |
|--|----------|
| Rolls size [m]                             | 8 x 1,08 |
| Rolls per pallet                           | 25       |
| Square meters per pallet [m <sup>2</sup> ] | 216      |

Sizes & packing may vary depending on the type of transportation. 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 information 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.

## ZEBRA VAPOUR BARRIER

### Application

- Position, without flame, the rolls on the application surface; the adhesion will be further promoted by using the primer PRIMER SINT. (Drawing 1)
- Provide for side & head laps respectively of 10 & 15 cm between the sheets. (Drawing 2)
- The height of the verticals must be equivalent to the thickness of the insulation panel plus 5 cm.
- Remove the thermoplastic film on the lower face of the membrane. (Drawing 3)
- With a torch or hot air gun weld the side and head laps; during this stage the overlaps should be pressed by using a roller (15 kg).
- With a torch or hot air gun burn the polyethylene film on the upper face of the membrane, taking particular care in the activation of the strips on the upper face. (Drawing 4)
- Position the insulation panel over the heated area, simply apply pressure with the hands. (Drawing 5)

### Recommendations

To best use the technical characteristics of bituminous membranes and guarantee the maximum performance and durability of the jobs where they are used, some simple but fundamental rules must be respected.

- The rolls are to be stored in an upright position, indoors in a dry and ventilated area, away from heat sources. 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.
- The rolls shall be kept in a warm or heated storage area during application, should the workability of the material deteriorate or become stiff and difficult to install during application, these should be returned to the heated storage area and substituted with new rolls. The rolls that are temporarily stored on the roof before application, shall be kept elevated by being left on their own pallets and shall be covered and protected from the weather.
- The application surface must be smooth dry & clean.
- The application surface must be previously treated with a suitable bituminous primer, to eliminate dust and enhance the adhesion of the membrane.
- **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.**
- The application must be done at temperature higher than +5°C.
- The application must be interrupted in adverse weather conditions (high humidity, rain, etc.).
- The pallets on which the rolls are packaged are intended for normal warehouse use.
- The materials on stock should be rotated following a first in first out rotation.

