



## Mineral finished composite waterproofing membrane

#### **Description**

Prefabricated modified composite polymer-bitumen waterproofing membrane composed of distilled bitumen and differentiated waterproofing masses, specifically designed for use over old bituminous waterproofing membranes.

The upper face compound is composed of distilled bitumen and elasto-plastomers while the lower face compound is composed of distilled bitumen and special polymers which provide particular characteristics of adhesion & workability.

A special waterproofing mass is used to bond the upper & lower compounds.

PLURA R is reinforced with a woven non woven single strand composite polyester fabric, with very good mechanical characteristics and exceptional dimensional stability.

The P version has a woven non woven polypropylene mat with very good resistance to foot traffic and dynamic & static puncture resistance. The PA version is self-protected with mineral slates which reduce heat absorption and improve the durability of the membrane.

PLURA R PA has a 10 cm side selvedge and a 15 cm head selvedge which promotes the adhesion between the various sheets.

#### **Methods of application**

The application of the membrane is generally obtained by heat, using either a gas or hot air torch making sure to provide for side laps of 10 cm and head laps of 15 cm. Considering the particular areas of usage the product must be applied fully bonded to the existing membrane, the same must also be done for those areas such as the perimeter, verticals and change of slope.

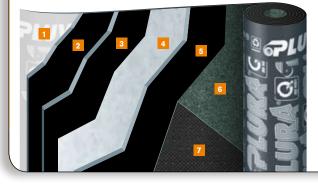
For further information we recommend to consult PLUVITEC's technical literature.

#### Fields of use

PLURA R is specifically indicated for use as a refurbishment layer over existing old bituminous waterproofing membranes, especially those with mineral slate finish considering the excellent characteristics of adhesion and workability. PLURA R is compatible and can be applied with all PLUVITEC membranes, both APP & SBS.

#### Stratigraphy

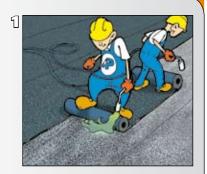
- 1. Polyethylene film
- 2. R compound
- 3. Waterproofing mass
- 4. Woven non woven single strand composite polyester reinforcement
- 5. Waterproofing mass
- 6. PA self-protected mineral surface
- 7. P self-protected polypropylene mat

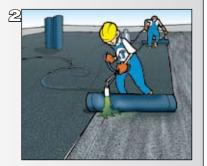


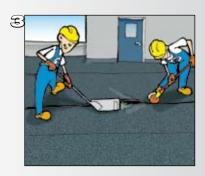
|  |                             | CE C                         | ertific                   | ation                        |            | N            | <sup>°</sup> laye | rs         |       | Metho   | od of             | appli          | catior            | 1                         | Тур          | e of a           | ipp.       |                     |           | Туре             |           |            |
|--|-----------------------------|------------------------------|---------------------------|------------------------------|------------|--------------|-------------------|------------|-------|---------|-------------------|----------------|-------------------|---------------------------|--------------|------------------|------------|---------------------|-----------|------------------|-----------|------------|
| Certificate N.<br>0958-CPD-DK029<br>★ Certificate N.<br>0958-CPD-DK030<br>► Certificate N.<br>0958-CPD-DK030<br>► Certificate N.<br>0958-CPD-DK030<br>► Certificate N.<br>0958-CPD-DK030<br>► Certificate N.<br>0958-CPD-DK029<br>► Certificate N.<br>0958-CPD-DK029<br>► Certificate N.<br>0958-CPD-DK029<br>► Certificate N.<br>0958-CPD-DK029<br>► Certificate N.<br>0958-CPD-DK029<br>■ Certificate N.<br>0958-CPD-DK029<br>■ Certificate N.<br>0958-CPD-DK029 | EN13707<br>Continuous Roofs | EN13859-1<br>Under Roof Tile | EN13970<br>Vapour Barrier | ★ EN13969<br>Retaining Walls | Other Uses | Single Layer | Double Layer      | Multilayer | Torch | Hot Air | Mixed (Torch/Air) | Cold Bond Glue | Mechanical Fixing | Thermo Ad / Self Adhesive | Fully Bonded | Partially Bonded | Loose Laid | Complimentary Layer | Top Layer | Heavy Protection | Anti-root | Other Uses |
| PLURA R P 4 MM + POLYPROPYLENE   | •                           |                              |                           | •                            |            |              | •                 | ٠          | •     |         |                   |                |                   |                           | •            |                  |            | •                   | •         | •                |           |            |
| PLURA R PA 5 KG/M <sup>2</sup>   | •                           | •                            |                           |                              |            |              | •                 | ٠          | ٠     |         |                   |                |                   |                           | •            |                  |            |                     | •         |                  |           |            |
|  |                             |                              |                           |                              |            |              |                   |            |       |         |                   |                |                   |                           |              |                  |            |                     |           |                  |           |            |
|  |                             |                              |                           |                              |            |              |                   |            |       |         |                   |                |                   |                           |              |                  |            |                     |           |                  |           |            |
|  |                             |                              |                           |                              |            |              |                   |            |       |         |                   |                |                   |                           |              |                  |            |                     |           |                  |           |            |
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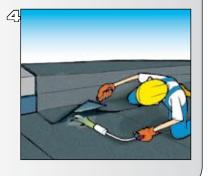
#### **Fields of use**

## How to apply









Sizes & packing\*

| Description<br>PLURA R   | P 4 mm +<br>Polypropylene | PA 5<br>kg/m² |
|--------------------------|---------------------------|---------------|
| Rolls size (m)           | 10 x 1                    | 8 x 1         |
| Rolls per pallet         | 20                        | 23            |
| Square meters per pallet | 200                       | 184           |

\*Sizes & packing may vary depending on the type of transportation. The technical data given is based on average values obtained during production. Pluvitec reserves the rights to change or modify the nominal values without prior notice or advice.

# 2

**PLURA** 

### **Application & recommendations**

- Clean the application surface.
- Apply by gas or hot air torch a 25 cm strip along all the vertical up stands.
- Position the membrane always starting from the lowest point, in order to have all the overlaps with the slope.

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- Apply and position the membranes staggered to avoid creating areas where the membrane overlap against the slope and in the direction of the drains.
- Cut the corners of the membrane which will be applied under the next sheet with a 45° angle.
- After having positioned the roll, re-roll the material for half of its length and begin application; repeat the same operation for the remaining half of the roll. (Fig. 1)
- It is necessary to heat the entire surface, except the overlaps, of the lower face to obtain a full adhesion to the application surface.
- During the application by torch, the material needs to be heated to a point where the compound starts to flow in such a way that it fully saturates the application surface. The melted flow of compound obtained by torching is the R mass. (Fig. 2)
- Torch the side laps (10 cm) and head laps (15 cm) with a torch for overlaps. During this stage the overlaps should be pressed by using a roller (15 kg) from which a bead of compound should flow. Do not iron the overlaps. (Fig. 3)
- Apply the membrane on the verticals making sure that they overlap on the horizontal surface at least 10 cm, make sure that they are fully bonded using a trowel to squeeze a bead of compound from underneath. (Fig. 4)
- The height of the vertical must be equivalent or superior to the finished surface by at least 15 cm.

# **Technical data**

| Technical Characteristics                 | Measure<br>Units | Reference<br>Norm | Р             | PA      | Tol. |  |
|---|------------------|-------------------|---------------|---------|------|--|
| Type of reinforcement                     |                  |                   | Single strar  |         |      |  |
| Upper face finish                         |                  |                   | Polypropylene | Mineral |      |  |
| Lower face finish                         |                  |                   | P.E.          | film    |      |  |
| Length                                    | m                | EN 1848-1         | 10 -1%        | 8 -1%   |      |  |
| Width                                     | m                | EN 1848-1         | 1 -1%         |         |      |  |
| Thickness                                 | mm               | EN 1849-1         | 4             |         | -5%  |  |
| Mass                                      | kg/m²            | EN 1849-1         |               | 5       | -10% |  |
| Cold flexibility                          | С                | EN 1109           | -1            |         |      |  |
| Flow resistance                           | °C               | EN 1110           | 13            | 130     |      |  |
| Flow resistance after ageing              | °C               | EN 1296           | 12            | 20      | -10% |  |
| Artificial U.V. ageing                    |                  | EN 1297           | pass          |         |      |  |
| Shear resistance L/T                      | N / 5 cm         | EN 12317-1        | 500/400       |         | -20% |  |
| Tensile strength L/T                      | N / 5 cm         | EN 12311-1        | 600/          | /500    | -20% |  |
| Elongation at break L/T                   | %                | EN 12311-1        | 35/           | /35     | -15  |  |
| Tearing resistance L/T                    | N                | EN 12310-1        | 150/          | /150    | -30% |  |
| Static puncture resistance                | kg               | EN 12730          | 15            |         |      |  |
| Dynamic puncture resistance               | mm               | EN 12691          | 900           |         |      |  |
| Dimensional stability                     | %                | EN 1107-1         | 0,3           | 0,3     |      |  |
| Loss mineral                              | %                | EN 12039          |               | 30      |      |  |
| Fire resistance                           |                  | EN 13501-5        | F RI          | DOF     |      |  |
| Fire reaction                             |                  | EN 13501-1        | I             |         |      |  |
| Tensile strength after ageing L/T         | N / 5 cm         | EN 1296           |               | NPD     | -20% |  |
| Elongation at break<br>after ageing L/T   | %                | EN 1296           |               | NPD     | -20% |  |
| Impermeability<br>after artificial ageing | Кра              | EN 1296           | 60            | 60      |      |  |
| Watertightness                            | Кра              | EN 1928           | 6             | 0       |      |  |



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