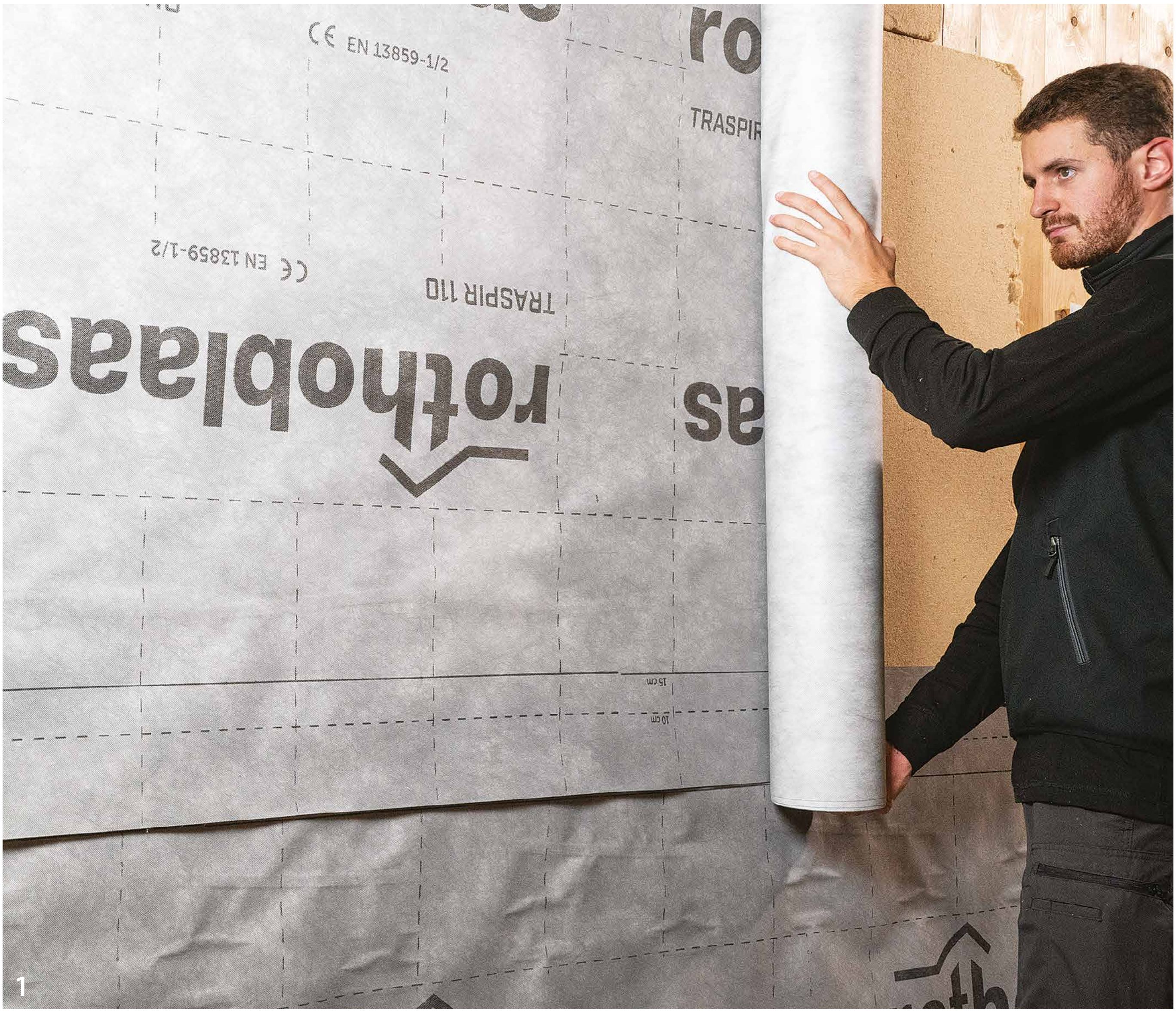
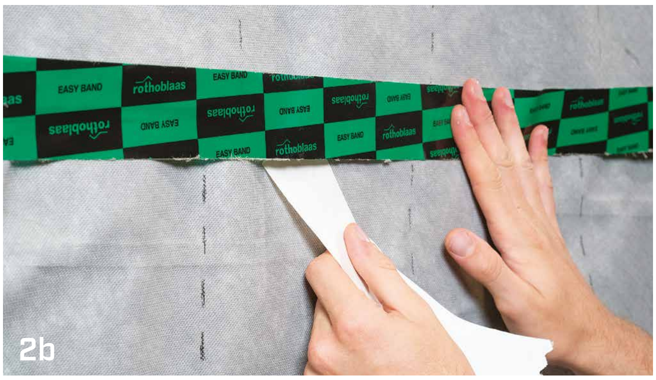
RECOMMENDATIONS FOR INSTALLATION: TRASPIR

APPLICATION ON WALL - EXTERNAL SIDE



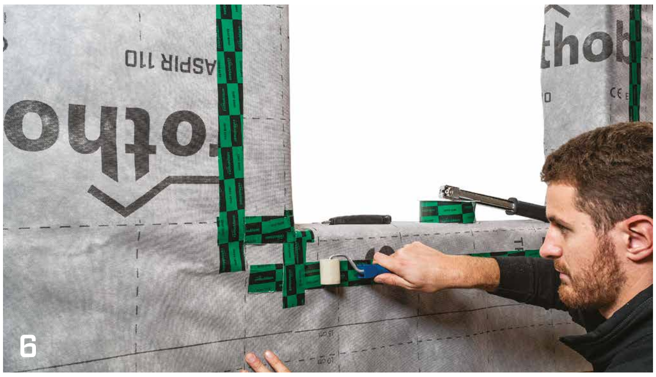


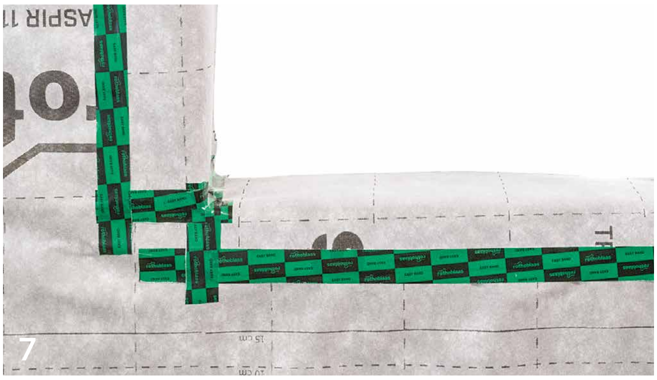
1	TRASPIR 95, TRASPIR 110, TRASPIR ALU 120, TRASPIR 135, TRASPIR EVO 135, TRASPIR 150, TRASPIR EVO 160, TRASPIR ALU FIRE A2 430
2a	DOUBLE BAND, SUPRA BAND, BUTYL BAND OUTSIDE GLUE
2b	ROTHOBLAAS TAPE

RECOMMENDATIONS FOR INSTALLATION: TRASPIR

VIDEO

APPLICATION ON WINDOW - EXTERNAL SIDE

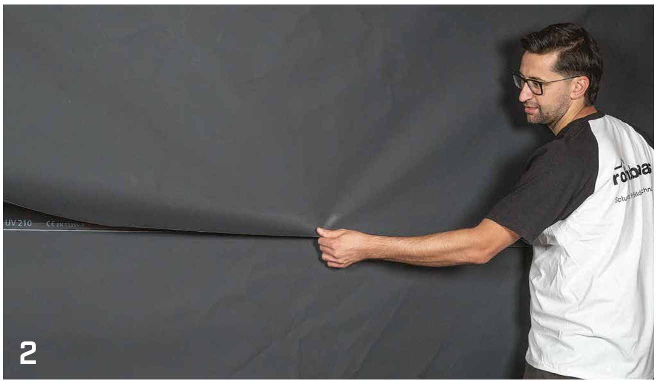




1	TRASPIR 95, TRASPIR 110, TRASPIR SUNTEX 120, TRASPIR 135, TRASPIR EVO 135, TRASPIR 150, TRASPIR EVO 160, TRASPIR ALU FIRE A2 430
2	MARLIN, CUTTER
5	HAMMER STAPLER 47, HAMMER STAPLER 22, HAND STAPLER, STAPLES
6	ROTHOBLAAS TAPE ROLLER

RECOMMENDATIONS FOR INSTALLATION: TRASPIR UV

APPLICATION ON WALL - MEMBRANE WITH DOUBLE TAPE



APPLICATION ON WALL - MEMBRANE WITHOUT DOUBLE TAPE

3 DOUBLE BAND, FACADE BAND, FRONT BAND UV

RECOMMENDATIONS FOR INSTALLATION: TRASPIR UV

VIDEO

APPLICATION ON WINDOW - EXTERNAL SIDE

1

2

3

4

5

6

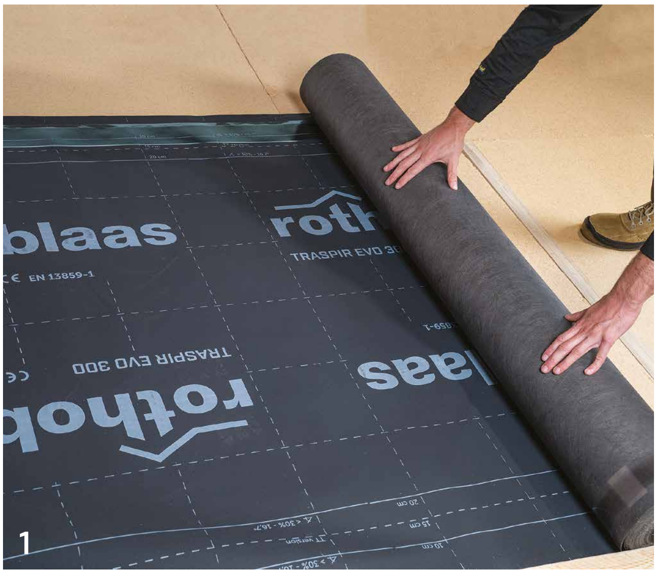
7

1	HAMMER STAPLER 47, HAMMER STAPLER 22, HAND STAPLER, STAPLES
2	MARLIN, CUTTER
6	FACADE BAND, FRONT BAND UV
7	PLASTER BAND OUT

RECOMMENDATIONS FOR INSTALLATION: TRASPIR

VIDEO

APPLICATION ON ROOF - EXTERNAL SIDE



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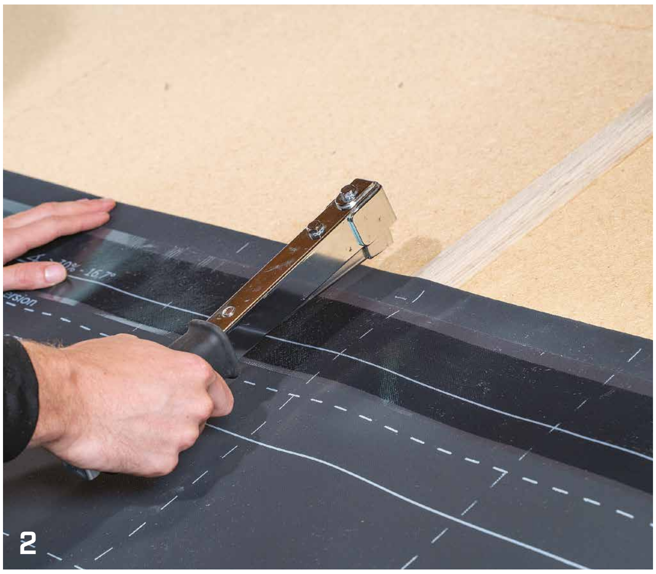
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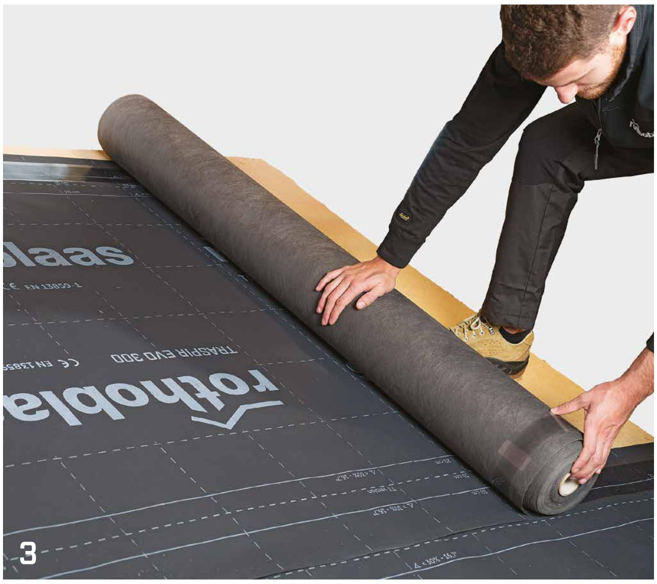
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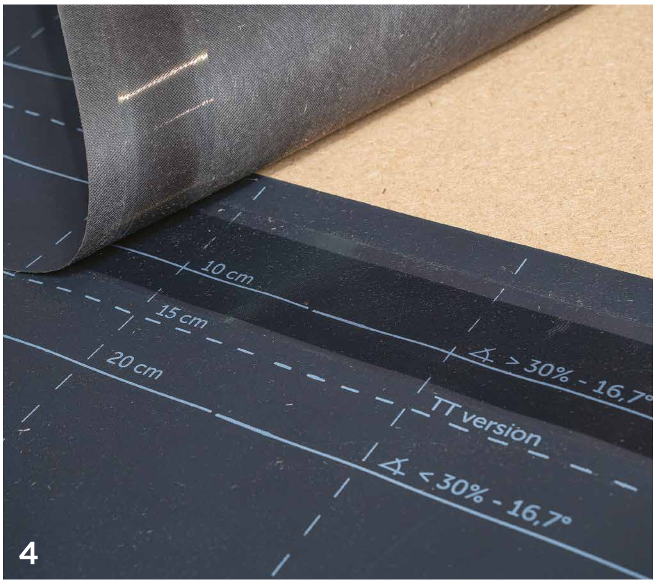


4


5a

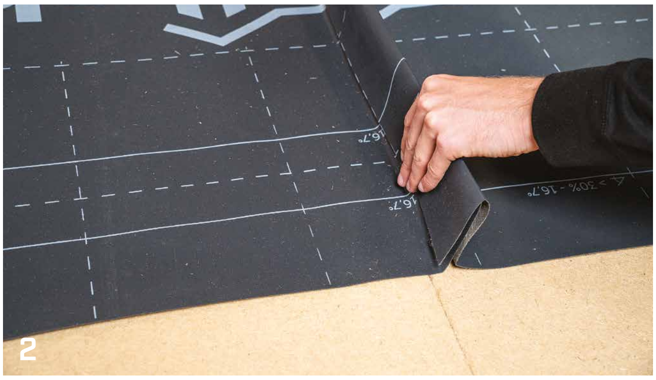

5b

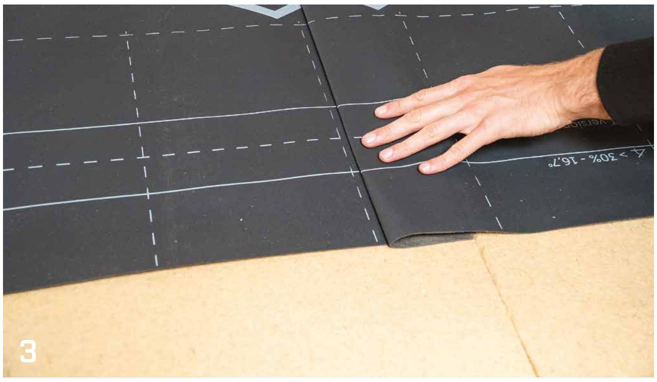

5c

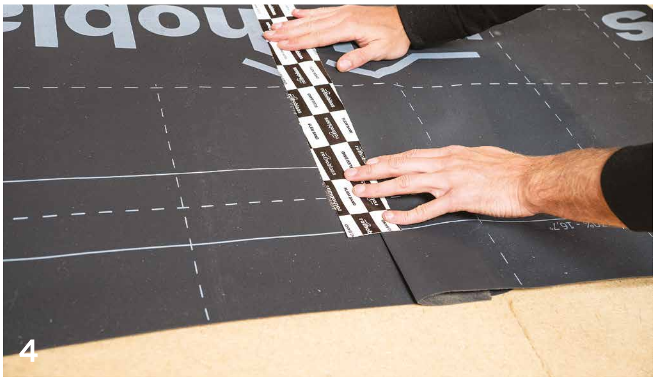
1	TRASPIR EVO 135, TRASPIR 150, TRASPIR NET 160, TRASPIR EVO 160, TRASPIR 200, TRASPIR ALU 200, TRASPIR FELT UV 210, TRASPIR EVO 220, TRASPIR DOUBLE NET 270, TRASPIR EVO 300, TRASPIR DOUBLE EVO 340, TRASPIR ALU FIRE A2 430
2	HAMMER STAPLER 47, HAMMER STAPLER 22, HAND STAPLER, STAPLES
5b	ROTHOBLAAS TAPE ROLLER
5c	DOUBLE BAND, SUPRA BAND, BUTYL BAND OUTSIDE GLUE

RECOMMENDATIONS FOR INSTALLATION: ROOF

TRANSVERSAL HEAD OVERLAPPING SEALING

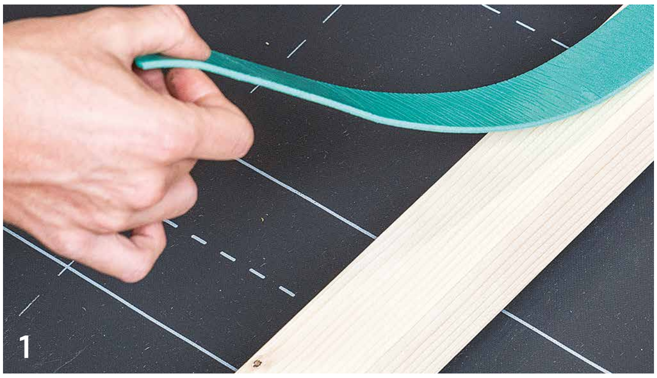






4 ROTHOBLAAS TAPE

SEALING FASTENING SYSTEMS

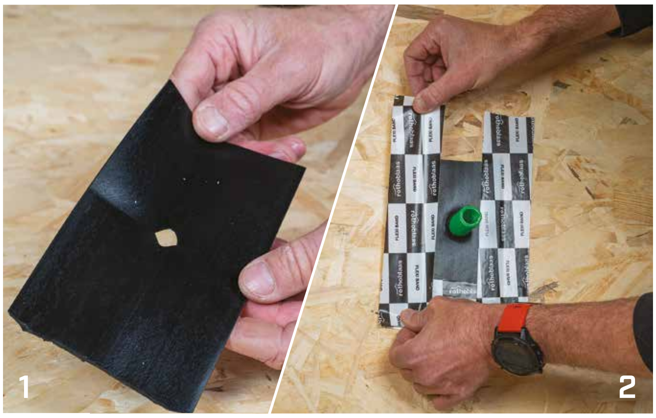


1 GEMINI

1 NAIL PLASTER, NAIL BAND, LIZARD

RECOMMENDATIONS FOR INSTALLATION

SEALING OF CABLES AND CORRUGATED TUBES THROUGH PIPES (MANICA FLEX OR MANICA PLASTER)

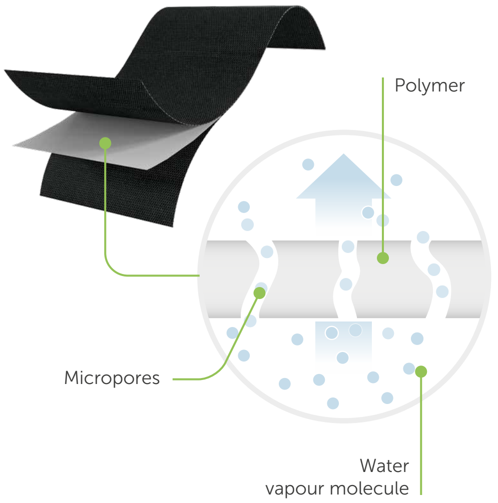


SEAL PIPE PENETRATION (BLACK BAND)

MONOLITHIC AND MICROPOROUS

The family of synthetic breathable membranes and vapour control layers and barriers (that is, membranes made of materials deriving from polymers) offer different properties as a function of the production technologies and raw materials used in processing.
Breathable membranes can be categorised into two main types: MICROPOROUS and MONOLITHIC.

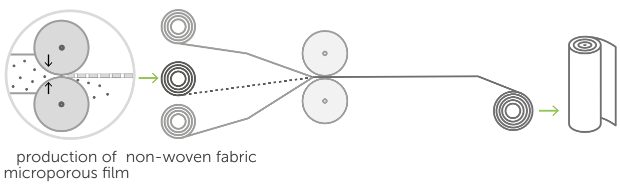
MICROPOROUS MEMBRANES



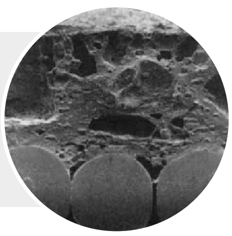
CHARACTERISTICS

Resistance to temperature	●○○
Durability and stability with ageing	●●○
UV stability	●●○
Chemical stability	●○○
Fire behaviour	●○○
Breathability (water vapour)	●●●
Watertightness	●●○
Airtightness	●●○
Resistance to heavy rain	●●○
Mechanical resistance	●●●
Slipping resistance	●●●
Resistance to pollutants	○○○

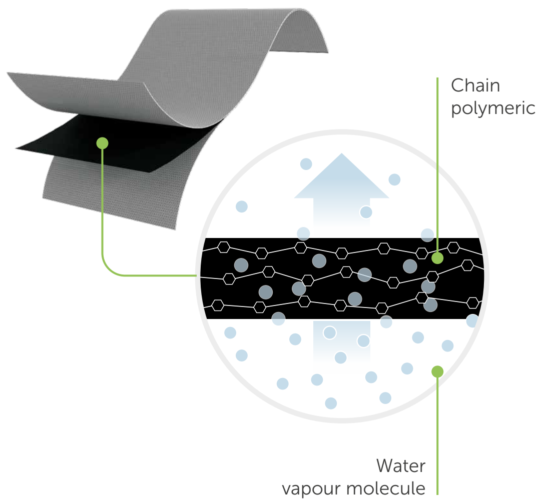
Membrane with functional microporous layer, obtained through the production process. The type of polymer used (PP or PE) and processing employed results in a breathable, functional, cost-effective membrane, but more susceptible to thermal stress and UV radiation.



Microscope image of a microporous membrane section.
Upper part: microporous film.
Lower part: support and protection fibre filaments.



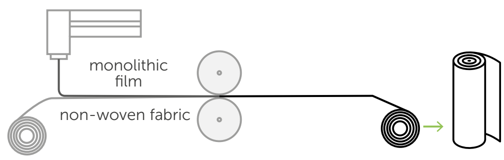
MONOLITHIC MEMBRANES



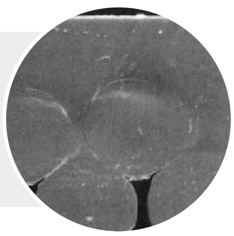
CHARACTERISTICS

Resistance to temperature	●●●
Durability and stability with ageing	●●●
UV stability	●●●
Chemical stability	●●●
Fire behaviour	●●○
Breathability (water vapour)	●●●
Watertightness	●●●
Airtightness	●●●
Resistance to heavy rain	●●●
Mechanical resistance	●●●
Resistance to pollutants	●●●

Membrane with a homogeneous and continuous, naturally breathable functional layer. The superior-quality polymer used (TPE, TPU or acrylic) and processing employed results in a high-performance membrane that is highly resistant to weathering and ageing.



Microscope image of a monolithic membrane section.
Upper part: monolithic film.
Lower part: support and protection fibre filaments.

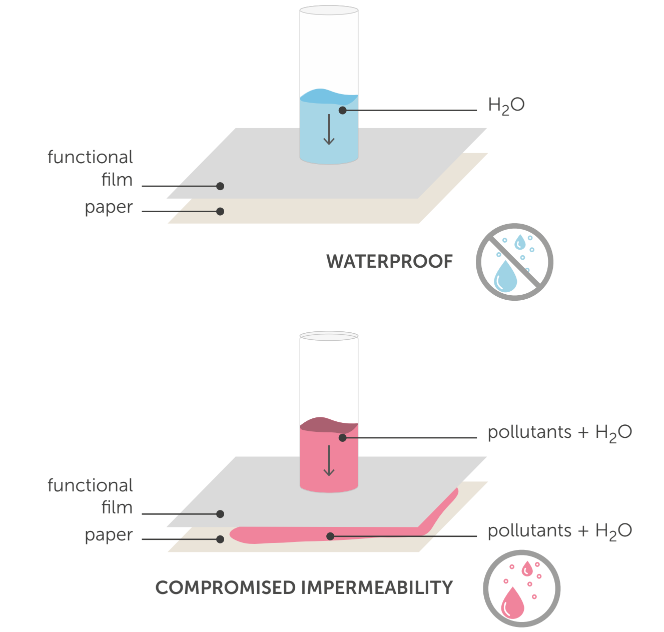


Microporous films are made from hydrophobic polymers, which are themselves incapable of interacting with water and vapour. **Special processing is required to make the film breathable**, which, however, stiffens and makes it more vulnerable to pollutants.

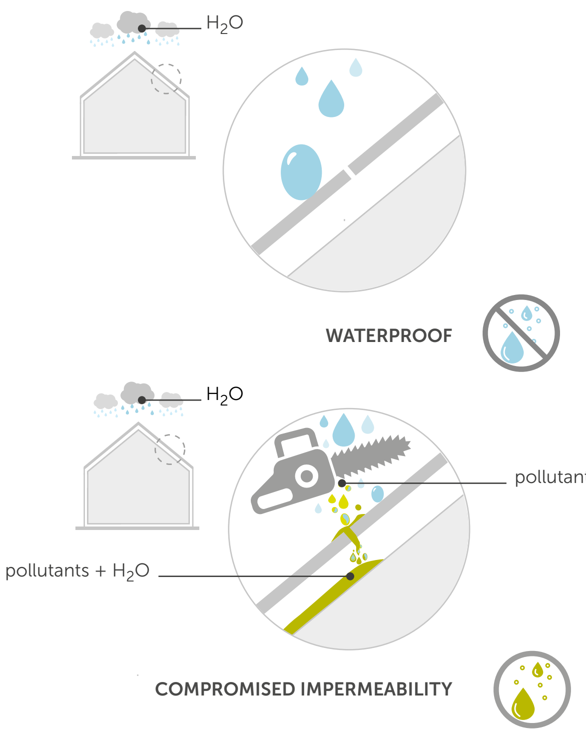
Monolithic films are made from hydrophilic polymers, which are naturally able to chemically interact with water and vapour. **The production process does not stress the polymer**, preserving the film's elasticity and resistance to pollutants.

MICROPOROUS MEMBRANES

LABORATORY TEST

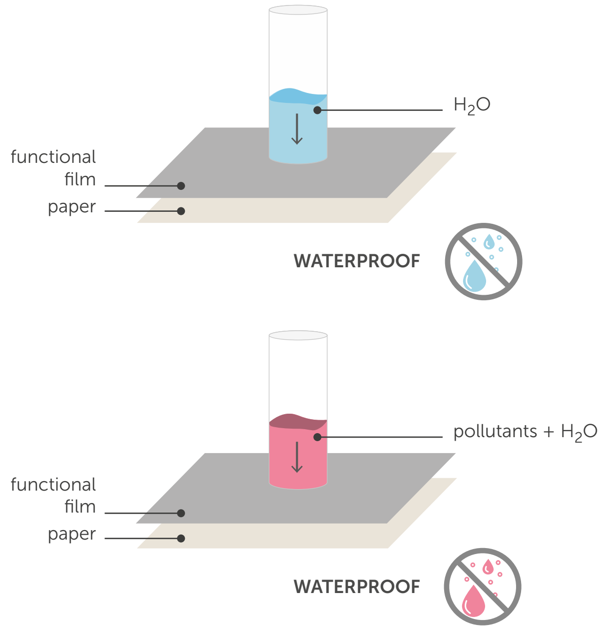


CASE ON SITE

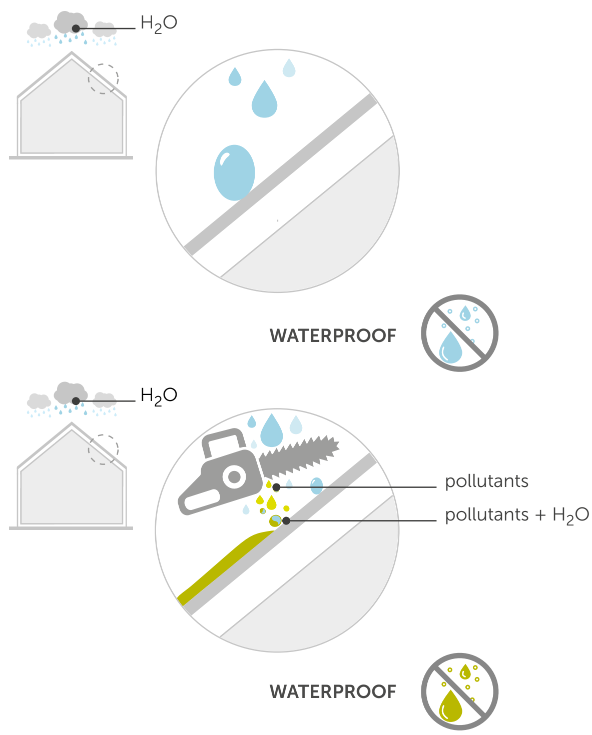


MONOLITHIC MEMBRANES

LABORATORY TEST



CASE ON SITE

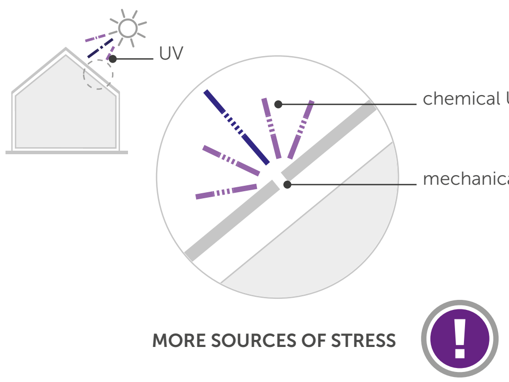


YouTube SUBSCRIBE

Learn about how microporous and monolithic membranes perform in the presence of water and surfactant mixtures.

MICROPOROUS MEMBRANES

RESISTANCE TO ULTRAVIOLET RADIATION

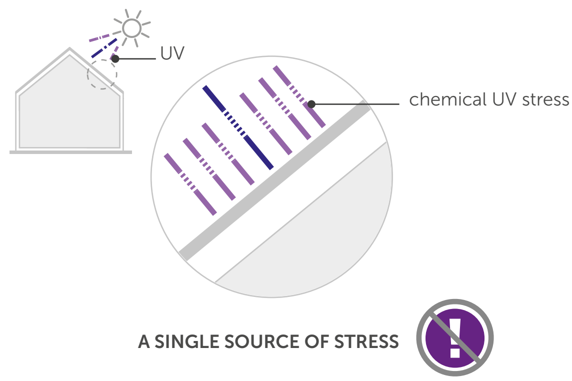


The more sources of stress act simultaneously, the greater the degradation of polymers.
In the production process, microporous films are subjected to mechanical stress, which stiffens the membrane.

Prolonged exposure of the microporous membrane to ultraviolet radiation **accelerates the degradation of the polymer, adding an extra source of stress**. Respecting the maximum UV exposure of the membrane is important in order not to compromise the durability of the functional film.

MONOLITHIC MEMBRANES

RESISTANCE TO ULTRAVIOLET RADIATION

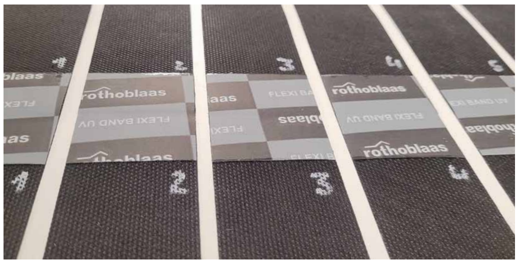


No mechanical or thermal stresses are applied in the production process of monolithic films. When a monolithic membrane is exposed to ultraviolet radiation, this is the sole source of stress for the functional film. Degradation is therefore less than that of a microporous film.
Monolithic membranes are invariably more resistant to UV rays. However, it is important to respect the maximum UV exposure of the membrane in order not to compromise the durability of the functional film.

MONOLITHIC MEMBRANES: PROVEN HIGH DURABILITY

MEZeroE

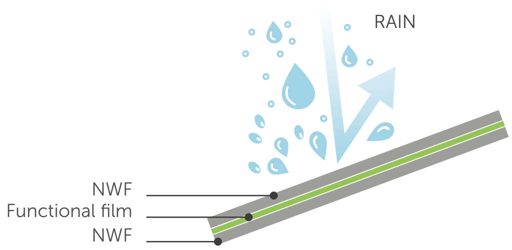
As part of the MEZeroE project, the Cracow University of Technology subjected monolithic membranes and the monolithic membranes + tape system to artificial ageing through exposure to UV rays and heat. The Politecnico di Milano tested naturally aged samples after direct exposure to weathering. In both cases, **the results show that monolithic membranes are extremely resistant to ageing and guarantee high durability**.



This test is part of the MEZeroE project that has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 953157.

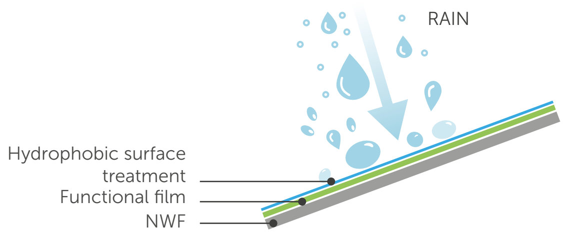
WATER REPELLENCY

All membrane surfaces are designed to be water-repellent. Water repellency can be provided through the choice of materials or by exploiting the texture of the surface. This is an important feature because it helps to keep the membrane dry.



HYDROFOBICITY

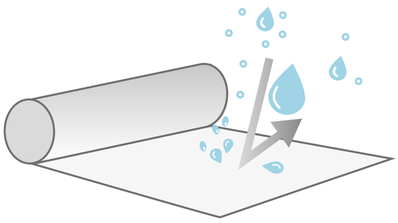
In some cases (e.g. TRASPIR EVO 300), the surfaces are made hydrophobic with a special treatment to further reduce interaction with water (the mechanism of non-interaction with water is similar to that of water repellency but is even more pronounced).



MEMBRANE PERFORMANCE

The membranes undergo various tests to determine their performance. Based on these, it is possible to choose the most suitable solution for your project.

WATERTIGHTNESS



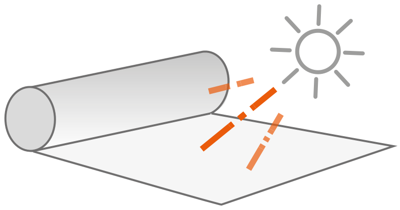
Ability of the product to temporarily prevent the passage of water during construction and in case of accidental breakage and dislocation of the roof covering.
Passing this test is not sufficient to make the products suitable to replace the sealing layer and to withstand standing water for long periods.

This property indicates resistance to penetration of water.
Standard **EN 13859-1/2** establishes the following classification:

- **W1**: High resistance to penetration of water
- **W2**: Medium resistance to penetration of water
- **W3**: Low resistance to penetration of water

Standard **EN 13859-1** and **2** establishes a requirement of resistance to 200 mm of static water pressure for 2 hours (classification W1).
NOTE: for vapour control membranes and control layers, the word "compliant" is only used when the product meets the most severe requirements of the test indicated above (200 mm static water pressure for 2 hours).

UV STABILITY AND AGEING

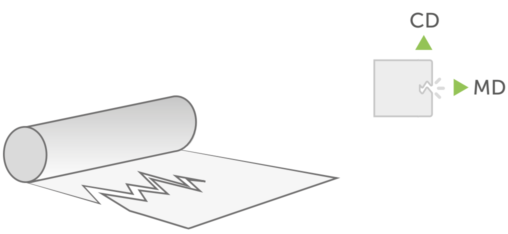


The test method consists of exposing the specimens to continuous UV irradiation at elevated temperature for 336 hours. This corresponds to a total UV radiation exposure of 55 MJ/m^2. It is conventionally regarded as equivalent to 3 months of average annual radiation in the Central European region.
For walls that do not exclude UV exposure with open joints, artificial ageing by UV must be extended over a period of 5000 hours.

Resistance to water penetration, tensile strength and elongation must be determined after artificial ageing.

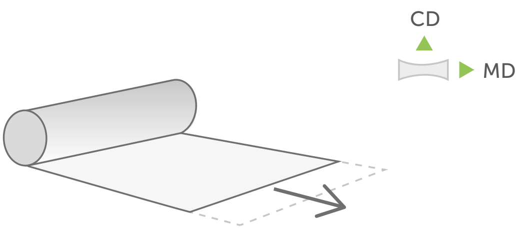
Note: actual climatic conditions are variable and depend on the application context, so it is difficult to establish an exact match between artificial ageing tests and actual conditions. Test data cannot reproduce unforeseeable causes of the product's degradation and do not consider the stresses to which it will be subjected during its service life.

TENSILE STRENGTH



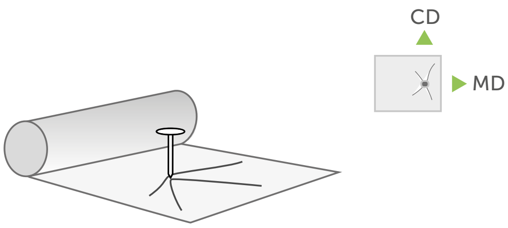
Force exercised both longitudinally and transversally, to determine the maximum load, expressed as N/50 mm.

ELONGATION



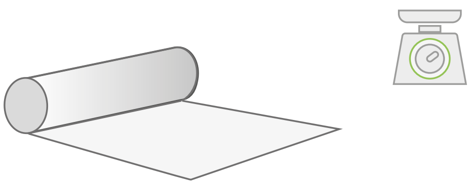
Indicates the maximum elongation percentage the product can suffer before failure.

RESISTANCE TO NAIL TEARING



Force exercised both longitudinally and transversally with the insertion of a nail, to determine the maximum load, expressed in N (Newton).

MASS PER UNIT AREA

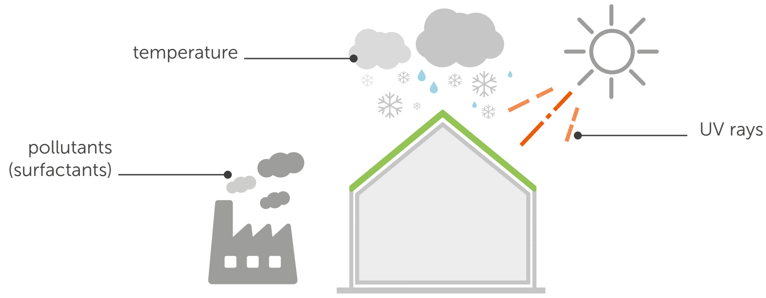


Mass per unit area expressed in g/m^2. High mass per unit area ensure great mechanical performance and superior abrasion resistance.

MD/CD: longitudinal/transversal values with respect to the direction the membrane rolls

DURABILITY

The polymers from which the synthetic membranes are made have been specially engineered to perform their function in the product and have excellent properties.
Certain stress causes, such as UV radiation, high temperatures and pollutants, affect these properties.
For example: the mechanical properties of a new membrane and a membrane exposed to ultraviolet (UV) radiation for 6 months are different. This is because UV attacks the chemical structure of certain polymers which, if not adequately protected by UV stabilisers, affect the properties of the finished product.



In order to maintain the properties of the product, it is important to choose it taking into account the conditions it will be exposed to throughout its life, from construction to operation, and to protect it as much as possible (the construction phase is a source of stress and accelerated ageing).
Durability is affected by the sum of these sources of stress: temperature, UV and pollutants.

CORRELATION BETWEEN EXPERIMENTAL AND ACTUAL RESULTS

The data obtained from the ageing tests are comparative and not absolute data. The relationship between test exposure and outdoor exposure depends on a number of variables, and no matter how sophisticated the accelerated ageing test may be, it is not possible to find a conversion factor: in accelerated ageing tests the test conditions are constant, whereas during real outdoor exposure they are variable. The most that can be obtained from accelerated laboratory ageing data is a reliable indication of the relative strength ranking of the various materials.
In the reality of a construction site, a product tends to be subject to more than one cause of stress and the conditions are unpredictable. Each application context has specific conditions, with effects that are difficult to measure with a standard test.
Therefore, it is important to maintain large safety margins, for example by choosing products with better properties even where not specifically required.

Given highly variable weather and radiation conditions, the value may change based on the country and weather conditions at the time of application.
To maintain product integrity, we recommend minimising exposure to environmental factors during installation and considering the following factors:

SEASONAL VARIATIONS | **PRODUCT ORIENTATION** | **LATITUDE** | **ALTITUDE** | **YEARLY RANDOM VARIATIONS OF THE WEATHER**