# TAPES, SEALANTS AND MEMBRANES

AIRTIGHTNESS, WIND TIGHTNESS



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# I RESEARCH & DEVELOPMENT

### LABORATORY TESTING AND EXPERIMENTAL CAMPAIGNS

### **ROTHOBLAAS LABORATORY**

Our innovative laboratory is located within our headquarters and it allows us to test our products.

We have all the necessary equipment to test our solutions under the most extreme conditions: high-temperature test ovens, UV-accelerated ageing test chambers, low-temperature test chambers, abrasimeters and outdoor spaces for weathering.





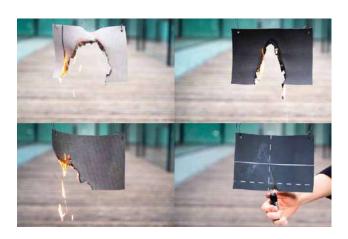
With the Martindale test we investigate our membranes wear, tear and pilling resistance. With ovens and low-temperature chambers we test the behaviour of our products when exposed to extreme temperatures.





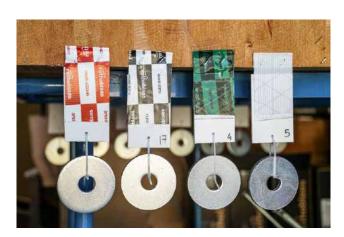
Exposure to outdoor environments makes it possible to test weathering resistance, under the synergistic effect of UV, humidity, heat and rain.





Experimental tests to investigate the water penetration resistance and fire behaviour of the membranes.



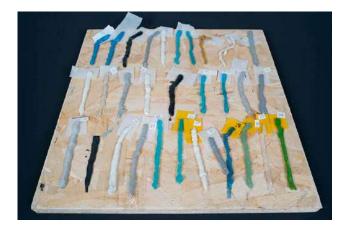


Test campaign on the cohesion and adhesion performance of acrylic adhesive tapes on different substrates.



Performance analysis of polyurethane sealing foams.







Test campaign to evaluate the adhesion, cohesion and elasticity of different glues and sealants.

# **QUALITY BUILDING**

Modern construction is increasingly based on the use of quality materials and state-of-the-art building techniques that reduce the energy impact of the building without disregarding housing comfort and aesthetics.

### REDUCING ENERGY CONSUMPTION

Numerous studies show that energy consumption in buildings causes over 40% of global CO<sub>2</sub> emissions. Greater attention paid to a more conscious use of energy during design is essential for both the environment and for economic savings.



### **MATERIALS**

Each material influences the acoustic performance, thermal inertia and thermo-hygrometric regulation of the building



### QUALITY OF **ENVIRONMENTS**

A healthy place to live has good air quality and protects against humidity, noise, radon gas and pollutants in general



### **VENTILATION**

If there is no adequate ventilation, indoor air quality tends to deteriorate, as a consequence of the presence and accumulation of pollutants



### THERMAL PERFORMANCE OF THE BUILDING CASING

To avoid energy wastage, the building must be insulated, thermal bridges must be minimised and air and wind tightness must be guaranteed



### LOCATION

The design must be adapted to the climate and location to take into account minimum and maximum temperature, humidity, amount of natural lighting, etc.



### RENEWABLE SOURCES

Give preference to the consumption of primary energy from renewable sources, limiting the use of energy from fossil fuels

### ■ INSPECTION TOOLS

In order to verify and document the real performance of the building, it is possible to carry out some non-destructive analyses that allow the identification and consequently the correction of possible installation errors.

With the Blower Door-Test a building is subjected to positive pressure of 50 Pa, while the quantity of air that filters from the surfaces which enclose the casing is measured. The lower the value of  $n_{50}$ , the better the energy performance, because there will be less uncontrolled air leakage that worsens the thermal performance of the building.

The thermal imaging camera, on the other hand, uses infrared radiation to detect, in real time, points with different temperatures and therefore heat losses due to insulation errors, thermal bridges, air leaks and dampness in the walls.

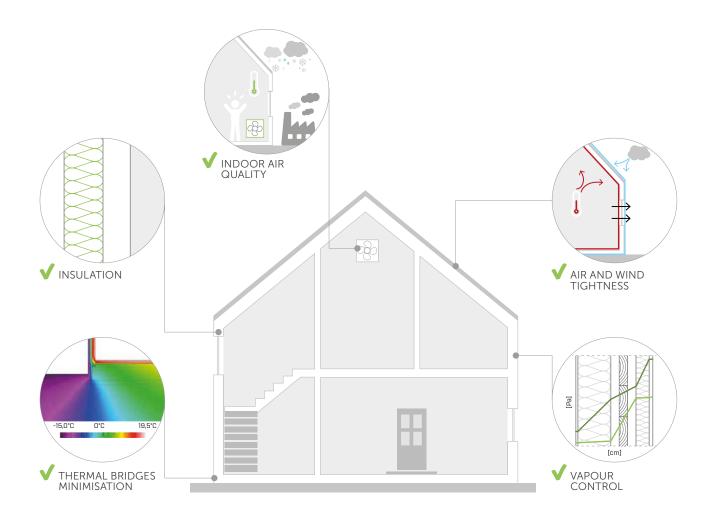
### ATTENTION TO DETAILS

The durability of timber structures is closely linked to their correct design and construction.



### ■ THERMAL PERFORMANCE OF THE BUILDING CASING

To ensure excellent housing comfort and superior performance, a building must meet very strict energy criteria, which can only be achieved through careful design of all construction details.



# I AIR AND WIND TIGHTNESS

The airtight casing guarantees that in the winter warm air and humidity inside the building are not lost to the outside, preventing the formation of interstitial condensation. The hermetic nature of the casing offers energy savings and comfortable living.

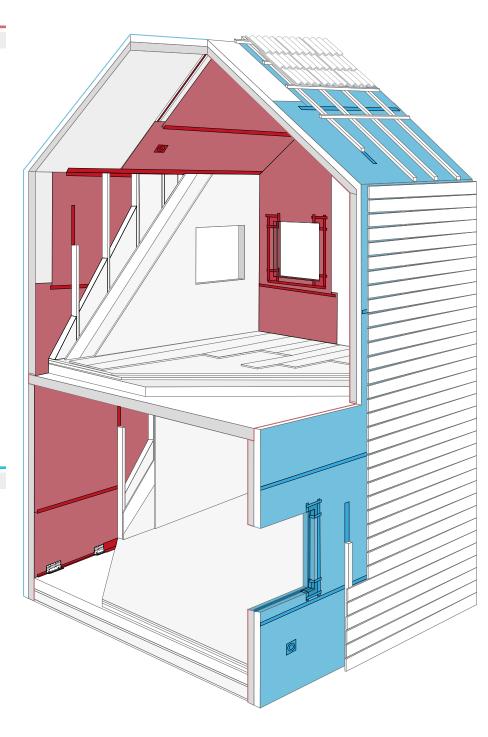
The wind tightness layer does not replace the airtightness layer, but its purpose is to protect the insulation layer from wind, rain and weather, preventing cold air and water from reducing the performance of the insulation layer.

### **AIRTIGHTNESS**

- ✓ Prevents heat loss in winter
- ✔ Prevents the entry of hot, humid air in summer
- ✔ Optimises the operation of controlled mechanical ventilation
- **✓** Prevents the uncontrolled passage of warm, moist air and the consequent risk of interstitial condensation
- ✔ Avoids discomfort due to draughts
- ▼ Improves acoustic comfort

### WIND TIGHTNESS

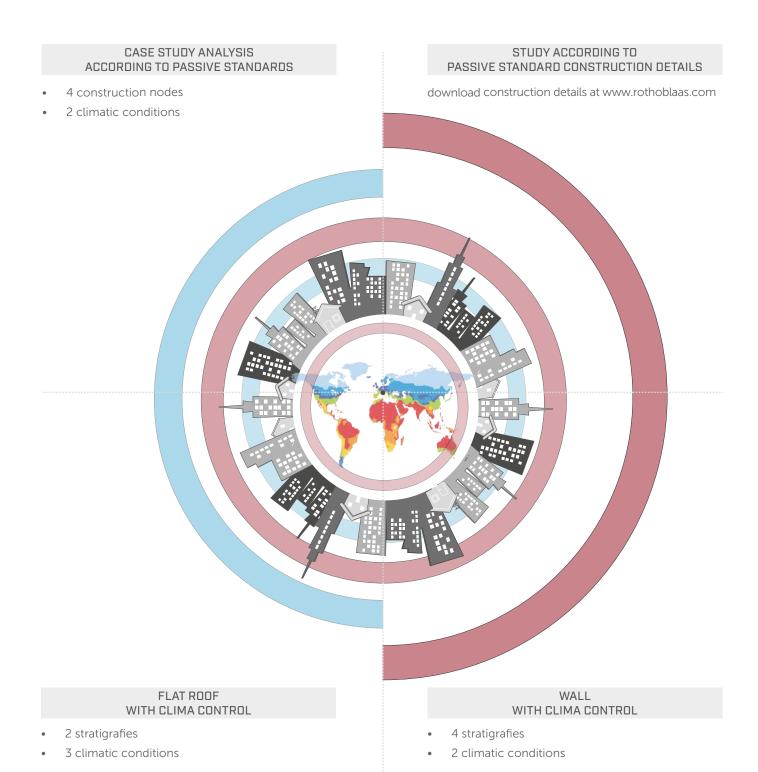
- **✓** Ensures the thermal efficiency of the insulation layer
- **✓** Protects the casing and improves the durability of materials
- ✔ Avoids the formation of currents and convective motions within the casing
- ✓ Serves as a temporary protective layer during construction phases
- ✔ Acts as a temporary protective layer in the event of cracks and dislocation of the roof layer or façade cladding



# CLIMATE AND CONSTRUCTION SYSTEMS

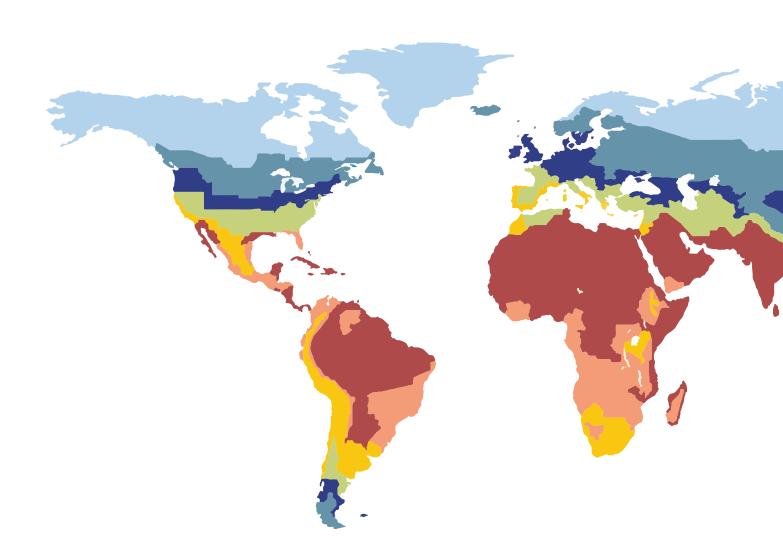
In order to ensure optimal performance of the building casing, the processes of heat, vapour, air and wind transport that occur within the different components must be studied and controlled. Usually, in cold climates and during the winter months there are problems with excessive humidity inside buildings due to poor ventilation. The vapour produced in closed rooms penetrates the walls and may condense in contact with cold interstitial layers, beams or cladding. In contrast, in hot and humid climates the source of vapour that leads to mould growth is the outside air. Humidity that is drawn in with the outside air may condense near the interior surfaces, which are cooler with air conditioning.

Rothoblaas, in cooperation with other research institutes, has sponsored several projects aimed at studying the behaviour of building solutions exposed to different climatic conditions through laboratory tests and dynamic simulations.



# I CLIMATE REGIONS AND SOLUTIONS

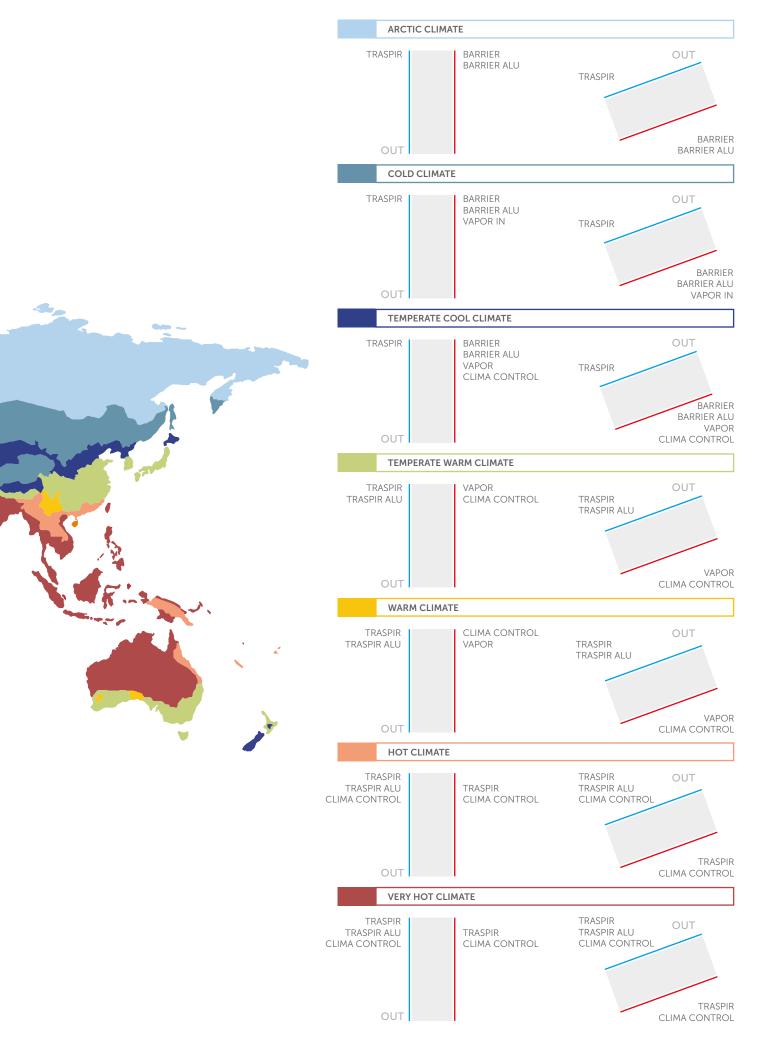
Visit our website www.rothoblaas.com and find the ideal membrane for your climate region and building system! The choice of membranes to be placed inside the building casing is highly dependent on climatic conditions, for example: the vapour flow inside a layers placed in a tropical or torrid climate is the reverse of layers in an arctic or cold climate. With regard to climate regions identified by energy efficiency institutes, the following solutions are recommended. These can vary depending on the building system and the type of technical installations used. Recommended solutions must always be verified by a designer.





### **OUR KEY PRODUCTS IN THE WUFI® SOFTWARE**

The WUFI® software is used to conduct thermo-hygrometric simulations in a dynamic state. Designers who use it regularly now have the option of including top-of-the-range Rothoblaas products in the simulation, obtaining highly accurate and reliable results as they are calculated on the real product that will be used to build the structure.



# STRUCTURES AND FIRE BEHAVIOUR

All building typologies have to consider fire safety issues, depending on the regulations in force and the intended use. This was done in order to minimise the causes of fire, ensure the stability of the structure and limit the spread of flames both inwards and towards neighbouring buildings, guaranteeing the safety of the occupants and access for rescue teams.

### WHAT IS FIRE PREVENTION

Fire prevention is the discipline that studies and puts into practice all measures aimed at preventing, reporting and reducing the probability of fire, or in any case limiting its negative effects on people and the environment. There are two types of fire prevention measures: active and passive protection.

### PREVENTIVE MEASURES

Fire prevention measures range from the professional installation of electrical systems to the ventilation of rooms with vapours and gases, and extend to common sense measures such as respect for order and cleanliness.

It is also important to keep the level of training and information of emergency teams high at all times.

### PROTECTIVE MEASURES

### ACTIVE PROTECTION

Active protection consists of all measures that require human intervention or the automatic activation of a system or plant.







### PASSIVE PROTECTION

Passive protection measures consist of measures that do not require human intervention or the operation of equipment. These measures must be planned in the design phase.







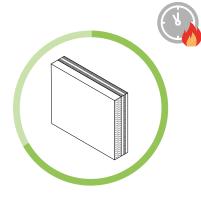
### THE FIRE DESIGN STEPS



### RISK CATEGORY

Depends on type, size and intended use of the building

### **STRUCTURES**



### FIRE RESISTANCE

Prevents the spread of fire to other areas

### **MATERIALS**



### **REACTION TO FIRE**

It limits the spread of flame

### REACTION TO FIRE

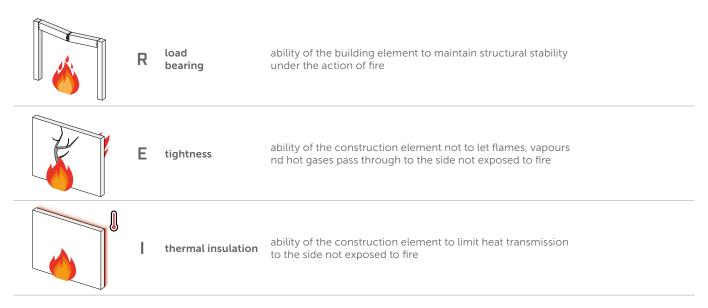
The reaction to fire class is an indicator that provides an assessment of whether or not the material contributes to fire. Different material behaviours correspond to different classes, ranging from non-combustible products to extremely flammable materials.

### European classification according to EN 13501-1

| <b>(b)</b> | class A1               | non-combustible products   |
|------------|------------------------|--|
| •          | classes A2, B, C, D, E | combustible products, as their participation in the fire increases                     |
| <b>.</b>   | class F                | indicates materials with Non-Determined Performance (NDP) or that do not reach Class E |
|            | s1, s2, s3             | are the three values indicating the optical density of smoke                           |
| 4,4        | d0, d1, d2             | are the three values indicating the danger of dripping                                 |

### FIRE RESISTANCE

Fire resistance indicates the ability of a building element to maintain structural stability during a fire condition for a given period of time, while retaining the ability to compartmentalise smoke and hot gases generated by combustion. The primary purpose of fire resistance is to ensure the load-bearing capacity of the structure under fire conditions. The characteristics that must be maintained during the action of fire are indicated by three letters:



The fire resistance rating is expressed in minutes, during which resistance under the action of flames must be ensured:15, 20, 30, 45, 60, 90, 120, 180, 240 and 360 minutes. The indication of minutes follows the abbreviation REI (e.g. REI120). In the case of non-load-bearing structures, where the load-bearing capacity is not significant, the R factor can be omitted and the minutes can be expressed as El (e.g. El90).





Discover the different flame reactions of our products! Watch the video on our YouTube channel





# I FIRE TEST

Awareness of fire design is increasingly growing. We have carried out many tests over the years to increase our know-how in this area and will continue to do so in the future.

### ■ SOME INVESTIGATIONS CARRIED OUT

### XYLOFON AND FIRE

We tested different setups using XYLOFON and FIRE SEALING to understand how the behaviour of certain joints changes when subjected to the action of flames and to obtain El values related to the joints.





### **FRONT BAND UV 210**

We have tested many of our products and assigned each of them a fire class according to EU and non-EU standards.



### **FULL-SCALE TESTING**

In cooperation with RISE - Research Institutes of Sweden, we carried out full-scale tests to determine the EI value of some of the most common joints in timber construction.



### ■ FUTURE PROJECTS

Our next research projects will focus on studying the fire behaviour of the most common nodes in the world of timber construction in order to determine their REI value. Our aim is to study them from every point of view, taking into account both the static aspects and the airtightness, to understand how the response of the joint changes during a fire in relation to the elements present.

Keep following us on our channels to keep up to date with developments.

# I FIRE SOLUTIONS

| PRODUCT                    | DESCRIPTION   | PAGE   |
|----------------------------|---|--|
| FRONT BAND UV 210          | UNIVERSAL SINGLE-SIDED TAPE, HIGHLY<br>RESISTANT TO UV RAYS   | EN 13501-1<br>B-s1,d0                            |
| FIRE FOAM                  | HIGH FIRE-RESISTANT SEALING FOAM                              | EN 13501-2<br>E1 240  EN 13501-1<br>B-s1,d0  118 |
| FIRE SEALING ACRYLIC       | HIGH FIRE-RESISTANT ACRYLIC SEALANT                           | EN 13501-2 EN 13501-1 B-si,d0                    |
| FIRE SEALING SILICONE      | HIGH FIRE-RESISTANT SILICONE SEALANT                          | EN 13501-2<br>E1 240  EN 13501-1<br>B-s1,d0      |
| FIRE STRIPE                | INTUMESCENT THERMO-INFLATABLE FLEXIBLE GASKET                 | NF P52-501 130                                   |
| BARRIER ALU NET SD1500     | REFLECTIVE VAPOUR BARRIER Sd > 1500 m                         | EN 13501-1<br>B-s1,d0                            |
| BARRIER ALU FIRE A2 SD2500 | REFLECTIVE AIR VAPOUR BARRIER FIRE<br>REACTION CLASS A2-s1,d0 | EN 13501-1<br>A2-sl,d0                           |
| TRASPIR EVO UV 115         | HIGHLY BREATHABLE MONOLITHIC MEMBRANE<br>RESISTANT TO UV RAYS | EN 13501-1<br>B-s1,d0                            |
| TRASPIR EVO 160            | HIGHLY BREATHABLE MONOLITHIC MEMBRANE                         | AS1530.2 EN 13501-1 B-s1,d2                      |
| TRASPIR FELT EVO UV 210    | BREATHABLE MONOLITHIC MEMBRANE<br>RESISTANT TO UV RAYS        | EN 13501-1<br>B-s1,d2                            |
| TRASPIR EVO UV 210         | HIGHLY BREATHABLE MONOLITHIC MEMBRANE<br>RESISTANT TO UV RAYS | ASTM E84 class 1 class A EN 13501-1 B-s1,d0      |
| TRASPIR EVO 300            | HIGHLY BREATHABLE MONOLITHIC MEMBRANE                         | EN 13501-1<br>B-s1,d0                            |
| TRASPIR ALU FIRE A2 430    | REFLECTIVE HIGHLY BREATHABLE MEMBRANE                         | EN 13501-1<br>A2-s1,d0                           |

# SEALANTS AND

# I TAPES AND SEALANTS

| START BAND WATERPROOFING PROFILE WITH HIGH   |
|--|
| MECHANICAL RESISTANCE  |
| CONNECT BAND SEALING WALL BARRIER FOR IRREGULAR SUBSTRATES                                     |
| LEVEL BAND SEALING WALL BARRIER FOR FOUNDATIONS  |
| GROUND BAND SELF-ADHESIVE BITUMINOUS MEMBRANE  |
| RADON FLOOR  WATERPROOFING RADON GAS BARRIER FOR FOUNDATIONS                                   |
| TERMI FLOOR  WATERPROOFING ANTI-TERMITE BARRIER FOR FOUNDATIONS                                |
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| BYTUM SPRAY BITUMINOUS MEMBRANE SEALANT SPRAY  |
| BYTUM LIQUID   REINFORCEMENT  SPREADABLE WATERPROOFING SHEATH   REINFORCING LAYER              |
| FLUID MEMBRANE SYNTHETIC SEALING MEMBRANE FOR BRUSH AND SPRAY APPLICATION                      |
| CONSTRUCTION SEALING COMPRESSIBLE SEALING GASKET FOR REGULAR JOINTS 52                         |
| TIE-BEAM STRIPE TIE BEAM SEALING PROFILE   |
| ALU BAND  REFLECTIVE SINGLE-SIDED ADHESIVE TAPE FOR INDOOR USE                                 |
| DOUBLE BAND UNIVERSAL DOUBLE-SIDED TAPE  |
| SEAL BAND   SEAL SQUARE SINGLE-SIDED TAPE FOR INDOOR USE                                       |
| EASY BAND UNIVERSAL SINGLE-SIDED TAPE  |
| SPEEDY BAND UNIVERSAL SINGLE-SIDED TAPE WITHOUT RELEASE LINER                                  |
| FLEXI BAND  UNIVERSAL SINGLE-SIDED HIGH-ADHESIVE TAPE  |
| FLEXI BAND UV  UNIVERSAL SINGLE-SIDED ADHESIVE TAPE WITH HIGH UV STABILITY AND HEAT RESISTANCE |
| FACADE BAND UV  UNIVERSAL SINGLE-SIDED TAPE, RESISTANT TO UV RAYS 76                           |

| SOLID BAND  ROBUST SINGLE-SIDED ADHESIVE TAPE SUITABLE FOR LOW TEMPERATURES | SUPRA BAND UNIVERSAL DOUBLE-SIDED BUTYL TAPE WITH HIGH ADHESIVENESS |
|---|---|
| SMART BAND UNIVERSAL SINGLE-SIDED TAPE WITH SEPARABLE LINER80               | ALU BUTYL BAND REFLECTING BUTYL ADHESIVE TAPE                       |
| PLASTER BAND  SPECIAL HIGH-ADHESION TAPE, CAN BE ALSO PLASTERED             | BLACK BAND UNIVERSAL SINGLE-SIDED BUTYL TAPE                        |
| PLASTER BAND LITE  TAPE WITH ADHESIVE MOUNTING STRIP,                       | MANICA PLASTER  ADHESIVE SEALING SLEEVE THAT CAN BE PLASTERED       |
| FRONT BAND UV 210   | MANICA FLEX SEALING SLEEVE FOR CONDUIT AND CABLE PASSAGE            |
| UNIVERSAL SINGLE-SIDED TAPE,<br>HIGHLY RESISTANT TO UV RAYS                 | MANICA POST ADHESIVE SEALING SLEEVE FOR OUTDOORS142                 |
| TERRA BAND UV BUTYL ADHESIVE TAPE   | MANICA LEAD LEAD PROFILE WITH EPDM SLEEVE                           |
| PRIMER SPRAY  UNIVERSAL SPRAY PRIMER FOR ACRYLIC  ADHESIVE TAPES            | TUBE STOPPER CABLE SEALING PLUGS                                    |
| PRIMER  UNIVERSAL PRIMER FOR ACRYLIC ADHESIVE TAPES                         | ALPHA PRESHAPED PROFILE FOR SEALING CORNERS                         |
| EXPAND BAND  SELF-EXPANDING SEALING TAPE                                    | LITE BAND ACRYLIC SINGLE-SIDED ADHESIVE TAPE                        |
| WINDOW BAND  SELF-EXPANDING SEALING TAPE                                    | DGZ  DOUBLE THREADED SCREW FOR INSULATION                           |
| FOR WINDOWS/DOORS110  | THERMOWASHER WASHER TO FASTEN INSULATION TO TIMBER                  |
| FRAME BAND  SELF-EXPANDING SEALING TAPE FOR WINDOWS/DOORS                   | ISULFIX ANCHOR FOR FASTENING INSULATION                             |
| EASY FOAM GENERAL PURPOSE FOAM SEALANT                                      | TO BRICKWORK  |
| HERMETIC FOAM HIGH PERFORMING SOUNDPROOFING SEALING FOAM                    | ECO GLUE  ADHESIVE GLUE FOR SEALING MEMBRANES                       |
| FIRE FOAM HIGH FIRE-RESISTANT SEALING FOAM                                  | SUPERB GLUE HIGH ELASTICITY ADHESIVE GLUE                           |
| MS SEAL MS POLYMER HIGH ELASTICITY SEALANT                                  | FOR SEALING MEMBRANES   |
| FIRE SEALING ACRYLIC HIGH FIRE-RESISTANT ACRYLIC SEALANT                    | HIGH ELASTICITY UNIVERSAL ADHESIVE GLUE FOR EXTERNAL USE            |
| FIRE SEALING SILICONE HIGH FIRE-RESISTANT SILICONE SEALANT                  |   |
| NAIL PLASTER   GEMINI HIGH-ADHESION NAIL POINT SEALANT TAPE126              |   |
| NAIL BAND BUTYL NAIL POINT SEALANT TAPE                                     |   |
| BUTYL BAND  DOUBLE-SIDED UNIVERSAL BUTYL TAPE                               |   |
| FIRE STRIPE INTUMESCENT THERMO-INFLATABLE ELEVIPLE CASKET 130               |   |

# I NODES AND FIELD OF APPLICATION

|                  |                |   | ALU BAND | DOUBLE BAND | SEAL BAND   SEAL SQUARE | EASY BAND | SPEEDY BAND | FLEXI BAND | FLEXI BAND UV | FACADE BAND UV | SOLID BAND | SMART BAND | PLASTER BAND | PLASTER BAND LITE | FRONT BAND UV 210 | TERRA BAND | EXPAND BAND | WINDOW BAND | FRAME BAND | MEMBRANE GLUE | ECO GLUE | SUPERB GLUE | OUTSIDE GLUE |  |
|------------------|----------------|---|----------|-------------|-------------------------|-----------|-------------|------------|---------------|----------------|------------|------------|--------------|-------------------|-------------------|------------|-------------|-------------|------------|---------------|----------|-------------|--------------|--|
|                  |                | internal  | <b>v</b> | <b>V</b>    | <b>v</b>                | <b>v</b>  | <b>v</b>    | <b>v</b>   | <b>v</b>      | <b>v</b>       | <b>v</b>   | <b>v</b>   | <b>v</b>     | <b>~</b>          | <b>v</b>          | <b>v</b>   | <b>v</b>    | <b>V</b>    | <b>v</b>   | <b>v</b>      | <b>v</b> | <b>v</b>    |              |  |
|                  |                | external  |          | <b>V</b>    |                         | <b>v</b>  | <b>v</b>    | <b>v</b>   | <b>v</b>      | <b>v</b>       | <b>v</b>   | <b>v</b>   | <b>v</b>     | <b>✓</b>          | <b>v</b>          | <b>v</b>   | <b>v</b>    | <b>√</b>    | <b>v</b>   |               |          |             | <b>✓</b>     |  |
|                  | <u> </u>       | foundation - wall                                     |          |             |                         |           |             |            |               |                |            |            |              |                   |                   |            |             |             |            |               |          |             |              |  |
| ODES             | H              | wall - wall   |          |             | <b>v</b>                | <b>v</b>  | <b>v</b>    | <b>v</b>   | <b>v</b>      | <b>v</b>       | <b>V</b>   | <b>v</b>   | <b>v</b>     |                   | <b>~</b>          | <b>v</b>   | <b>v</b>    | <b>V</b>    | <b>v</b>   | <b>~</b>      | <b>v</b> | <b>~</b>    | <b>~</b>     |  |
| STRUCTURAL NODES |                | slab - wall   |          |             | <b>v</b>                | <b>v</b>  | <b>v</b>    | <b>v</b>   | <b>v</b>      | <b>v</b>       | <b>V</b>   | <b>v</b>   | <b>v</b>     |                   | <b>~</b>          | <b>v</b>   | <b>v</b>    | <b>~</b>    | <b>v</b>   | <b>~</b>      | <b>v</b> | <b>v</b>    | <b>~</b>     |  |
| STRUC            |                | beam - wall   |          |             | <b>V</b>                | <b>v</b>  | <b>~</b>    | <b>v</b>   | <b>~</b>      | <b>v</b>       | <b>~</b>   | <b>v</b>   | <b>V</b>     | <b>v</b>          | <b>V</b>          | <b>v</b>   | <b>~</b>    | <b>~</b>    | <b>V</b>   | <b>~</b>      | <b>V</b> | <b>v</b>    | <b>V</b>     |  |
|                  |                | girder - beam   |          |             | <b>✓</b>                | <b>~</b>  | <b>v</b>    | <b>v</b>   | <b>v</b>      | <b>v</b>       | <b>√</b>   | ✓          | <b>✓</b>     | <b>✓</b>          | <b>✓</b>          | <b>v</b>   | <b>~</b>    | ✓           | <b>✓</b>   | <b>✓</b>      | <b>✓</b> | <b>√</b>    | <b>✓</b>     |  |
| SMC              |                | door / wall frame<br>- wall                           |          |             | <b>~</b>                | <b>~</b>  |             | <b>~</b>   | <b>~</b>      | <b>~</b>       | <b>~</b>   | <b>~</b>   | <b>~</b>     | <b>~</b>          | <b>~</b>          | <b>~</b>   | <b>~</b>    | <b>~</b>    | <b>~</b>   | <b>~</b>      | <b>~</b> | <b>~</b>    | <b>~</b>     |  |
| DOORS/WINDOWS    |                | skylight  |          |             | <b>v</b>                | <b>v</b>  |             | <b>v</b>   | <b>V</b>      |                | <b>v</b>   | <b>v</b>   | <b>v</b>     | <b>v</b>          |                   | <b>v</b>   | <b>v</b>    | <b>~</b>    | <b>v</b>   | <b>~</b>      | <b>v</b> | <b>v</b>    | <b>~</b>     |  |
| 000              |                | under-girder<br>sealing                               |          |             |                         |           |             |            |               |                | <b>~</b>   | <b>~</b>   | <b>~</b>     |                   |                   |            |             |             |            |               |          |             |              |  |
|                  |                | sealing nail point                                    |          |             |                         |           |             |            |               |                |            |            |              |                   |                   | <b>v</b>   |             |             |            |               |          |             |              |  |
| _                | <del>/ /</del> | sealing membranes                                     | <b>v</b> | <b>~</b>    | <b>~</b>                | <b>~</b>  | <b>~</b>    | <b>~</b>   | <b>~</b>      | <b>~</b>       | <b>~</b>   | <b>~</b>   | <b>~</b>     |                   | <b>~</b>          |            |             |             |            | <b>~</b>      | <b>~</b> | <b>~</b>    | <b>~</b>     |  |
| NGS              |                | sealing by compression                                |          |             |                         |           |             |            |               |                |            |            |              |                   |                   |            | <b>~</b>    | <b>√</b>    | <b>✓</b>   |               |          |             |              |  |
| SEALINGS         |                | sealing that can<br>be plastered                      |          |             |                         |           |             |            |               |                |            |            | <b>v</b>     | <b>~</b>          |                   |            |             |             |            |               |          |             |              |  |
| _                |                | sealing of technical<br>installations and<br>passages | <b>v</b> |             | <b>~</b>                | <b>~</b>  |             | <b>~</b>   | <b>~</b>      | <b>~</b>       |            | <b>~</b>   | <b>~</b>     |                   |                   |            |             |             |            | <b>~</b>      | <b>~</b> | <b>~</b>    | <b>~</b>     |  |
|                  |                | chimneys and vents                                    | <b>√</b> |             | <b>√</b>                | ✓         |             | <b>√</b>   | <b>√</b>      | <b>v</b>       | <b>v</b>   | <b>v</b>   | <b>√</b>     |                   |                   | <b>v</b>   | <b>✓</b>    | ✓           |            | <b>√</b>      | <b>√</b> | ✓           | <b>√</b>     |  |

| START BAND | LEVEL BAND | GROUND BAND | RADON FLOOR | TERMI FLOOR | BYTUM BAND | PROTECT  | BYTUM SPRAY | BYTUM LIQUID | FLUID MEMBRANE | CONSTRUCTION SEALING | TIE BEAM STRIPE | EASY FOAM | HERMETIC FOAM | FIRE FOAM | MS SEAL  | FIRE SEALING A | FIRE SEALING S | NAIL PLASTER   GEMINI | NAIL BAND | BUTYL BAND | FIRE STRIPE | SUPRA BAND | ALU BUTYL BAND | BLACK BAND | MANICA PLASTER | MANICA FLEX | MANICA POST | TUBE STOPPER | АГРНА    |
|------------|------------|-------------|-------------|-------------|------------|----------|-------------|--------------|----------------|----------------------|-----------------|-----------|---------------|-----------|----------|----------------|----------------|-----------------------|-----------|------------|-------------|------------|----------------|------------|----------------|-------------|-------------|--------------|----------|
| <b>v</b>   | <b>v</b>   | <b>v</b>    | <b>v</b>    | <b>v</b>    | <b>v</b>   | <b>v</b> | <b>v</b>    | <b>v</b>     | <b>v</b>       | <b>v</b>             | <b>v</b>        | <b>v</b>  | <b>v</b>      | <b>v</b>  | <b>v</b> | <b>v</b>       | <b>v</b>       | <b>v</b>              | <b>v</b>  | <b>v</b>   | <b>v</b>    | <b>v</b>   | <b>v</b>       | <b>v</b>   | <b>v</b>       | <b>v</b>    | <b>v</b>    | <b>v</b>     | <b>v</b> |
| <b>v</b>   | <b>v</b>   | <b>v</b>    | <b>v</b>    | <b>v</b>    | <b>v</b>   | <b>v</b> | <b>v</b>    | <b>v</b>     | <b>v</b>       | <b>v</b>             | <b>v</b>        | <b>v</b>  | <b>v</b>      | <b>v</b>  | <b>~</b> | <b>v</b>       | <b>v</b>       | <b>~</b>              | <b>v</b>  | <b>v</b>   | <b>v</b>    | <b>v</b>   | <b>v</b>       | <b>v</b>   | <b>v</b>       | <b>v</b>    |             | <b>v</b>     | <b>v</b> |
| <b>~</b>   | <b>v</b>   | <b>v</b>    | <b>v</b>    | <b>v</b>    | <b>v</b>   | <b>~</b> | <b>v</b>    | <b>v</b>     | <b>v</b>       |                      | <b>v</b>        |           |               |           |          |                |                |                       |           |            |             |            | <b>~</b>       | <b>v</b>   |                |             |             |              |          |
| <b>~</b>   | <b>√</b>   |             |             |             | <b>~</b>   | <b>~</b> | <b>√</b>    | <b>√</b>     | <b>√</b>       | <b>~</b>             | <b>v</b>        | <b>√</b>  | <b>v</b>      | <b>✓</b>  | <b>~</b> | <b>v</b>       | <b>~</b>       |                       | <b>v</b>  | <b>√</b>   | <b>~</b>    | <b>✓</b>   | <b>√</b>       | <b>v</b>   | <b>✓</b>       |             |             |              |          |
| <b>~</b>   | <b>~</b>   | <b>v</b>    |             |             | <b>~</b>   | <b>~</b> | <b>✓</b>    | <b>v</b>     | <b>✓</b>       | <b>~</b>             | <b>~</b>        | <b>~</b>  | <b>~</b>      | <b>~</b>  | <b>~</b> | <b>~</b>       | <b>~</b>       |                       | <b>~</b>  | <b>✓</b>   | <b>~</b>    | <b>~</b>   | <b>~</b>       | <b>~</b>   | <b>~</b>       |             |             |              |          |
| <b>v</b>   | <b>v</b>   | <b>v</b>    |             |             | <b>v</b>   | <b>v</b> | <b>v</b>    | <b>v</b>     | <b>v</b>       | <b>v</b>             | <b>v</b>        | <b>v</b>  | <b>v</b>      | <b>v</b>  | <b>v</b> | <b>v</b>       | <b>v</b>       |                       | <b>v</b>  | <b>v</b>   | <b>v</b>    | <b>v</b>   | <b>v</b>       | <b>v</b>   | <b>v</b>       |             |             |              |          |
| <b>v</b>   | <b>v</b>   | <b>v</b>    |             |             | <b>v</b>   | <b>~</b> | <b>v</b>    | <b>v</b>     | <b>v</b>       | <b>v</b>             | <b>v</b>        | <b>v</b>  | <b>v</b>      | <b>v</b>  | <b>~</b> | <b>~</b>       | <b>v</b>       |                       | <b>v</b>  | <b>v</b>   | <b>v</b>    | <b>v</b>   | <b>√</b>       | <b>v</b>   | <b>v</b>       |             |             |              |          |
|            |            |             |             |             | <b>~</b>   | <b>~</b> | <b>~</b>    | <b>~</b>     | <b>✓</b>       | <b>~</b>             |                 | <b>~</b>  | <b>~</b>      | <b>~</b>  | <b>~</b> | <b>~</b>       | <b>~</b>       |                       |           | <b>~</b>   | <b>~</b>    | <b>~</b>   | <b>~</b>       | <b>~</b>   | <b>~</b>       |             |             |              | <b>v</b> |
|            |            |             |             |             | <b>v</b>   | <b>v</b> | <b>v</b>    | <b>v</b>     | <b>v</b>       | <b>v</b>             |                 | <b>v</b>  | <b>v</b>      | <b>v</b>  | <b>√</b> | <b>√</b>       | <b>v</b>       |                       |           | <b>v</b>   | <b>v</b>    | <b>v</b>   | <b>v</b>       | <b>v</b>   | <b>v</b>       |             |             |              | <b>v</b> |
| <b>v</b>   |            | <b>v</b>    |             |             |            | <b>v</b> |             |              |                |                      |                 |           |               |           |          |                |                |                       |           |            |             |            |                |            | <b>✓</b>       |             |             |              |          |
|            |            |             |             |             |            |          |             |              |                |                      |                 |           |               |           |          |                |                | <b>√</b>              | <b>v</b>  |            |             |            | <b>v</b>       | <b>v</b>   |                |             |             |              |          |
|            |            |             |             |             |            |          |             |              |                |                      |                 |           |               |           |          |                |                |                       |           | <b>v</b>   |             | <b>v</b>   |                |            |                |             |             |              |          |
| <b>v</b>   | <b>v</b>   |             |             |             |            |          |             |              |                | <b>v</b>             | <b>v</b>        | <b>v</b>  | <b>v</b>      | <b>v</b>  |          |                |                | <b>√</b>              | <b>v</b>  | <b>v</b>   | <b>v</b>    | <b>v</b>   |                |            |                |             |             |              |          |
|            |            |             |             |             | <b>~</b>   | <b>~</b> |             |              |                |                      |                 |           |               |           |          |                |                |                       |           |            |             |            |                |            | <b>v</b>       |             |             |              |          |
|            |            |             |             |             | <b>v</b>   | <b>~</b> | <b>√</b>    | <b>v</b>     | <b>√</b>       |                      |                 | <b>~</b>  | <b>v</b>      | <b>v</b>  | <b>~</b> | <b>v</b>       | <b>&gt;</b>    |                       |           |            | <b>v</b>    |            |                | <b>v</b>   | <b>V</b>       | <b>v</b>    | <b>~</b>    | <b>√</b>     |          |
|            |            |             |             |             | <b>√</b>   | <b>v</b> | <b>√</b>    | <b>v</b>     | <b>√</b>       |                      |                 | <b>V</b>  | <b>v</b>      | <b>√</b>  | <b>V</b> | <b>v</b>       | <b>~</b>       |                       |           |            | <b>√</b>    |            | <b>V</b>       | <b>v</b>   | <b>√</b>       | <b>v</b>    | <b>√</b>    |              | <b>v</b> |

# **I SUPPORTS**

|                                       | ALU BAND | DOUBLE BAND | SEAL BAND   SEAL SQUARE | EASY BAND | SPEEDY BAND | FLEXI BAND | FLEXI BAND UV | FACADE BAND UV | SOLID BAND | SMART BAND | PLASTER BAND | PLASTER BAND LITE | FRONT BAND UV 210 | TERRA BAND | EXPAND BAND | WINDOW BAND | FRAME BAND |  |
|---------------------------------------|----------|-------------|-------------------------|-----------|-------------|------------|---------------|----------------|------------|------------|--------------|-------------------|-------------------|------------|-------------|-------------|------------|--|
| membrane with top PP layer            |          | •           | •                       | •         | •           | •          | •             | •              | •          | •          | •            | •                 | •                 | •          |             | •           |            |  |
| membrane with top PE layer            | •        | •           | •                       | •         | •           | •          | •             | •              | •          | •          | •            | •                 | •                 | •          | •           | •           | •          |  |
| membrane with top PA layer            | •        | •           | •                       | •         | •           | •          | •             | •              | •          | •          | •            | •                 | •                 | •          | •           | •           | •          |  |
| membrane with top acrylate layer      |          | •           | •                       | •         | •           | •          | •             | •              | •          | •          | •            | •                 | •                 | •          | •           | •           | •          |  |
| bituminous membrane                   |          | •           | •                       | •         | •           | •          | •             | •              | •          | •          | •            | •                 | •                 | •          |             | •           |            |  |
| membrane with top<br>aluminised layer | •        | •           | •                       | •         | •           | •          | •             | •              | •          | •          | •            | •                 | •                 | •          | •           | •           | •          |  |
| timber                                |          | •           | •                       | •         | •           | •          | •             | •              | •          | •          | •            | •                 | •                 | •          | •           | •           | •          |  |
| rough OSB                             |          | •           |                         | •         | •           | •          | •             | •              | •          | •          | •            | •                 | •                 | •          | •           | •           | •          |  |
| sanded OSB                            | •        | •           | •                       | •         | •           | •          | •             | •              | •          | •          | •            | •                 | •                 | •          | •           | •           | •          |  |
| plaster, concrete and bricks          | •        | •           |                         | •         |             | •          | •             | •              |            | •          | •            | •                 |                   | •          |             | •           |            |  |
| plasterboard and plaster fibre        | •        | •           | •                       | •         | •           | •          | •             | •              | •          | •          | •            | •                 | •                 | •          | •           | •           | •          |  |
| metal                                 | •        | •           | •                       | •         | •           | •          | •             | •              | •          | •          | •            | •                 | •                 | •          | •           | •           | •          |  |
| timber fibre insulation               | •        | •           |                         | •         |             | •          |               | •              |            | •          |              | •                 |                   | •          | •           | •           | •          |  |
| mineral wool insulation               | •        | •           |                         | •         |             | •          | •             | •              |            | •          |              | •                 |                   | •          | •           | •           | •          |  |
| polystyrene                           |          | •           | •                       | •         | •           | •          | •             | •              | •          | •          | •            | •                 | •                 | •          | •           | •           | •          |  |
| PVC and plexiglass                    |          | •           | •                       | •         | •           | •          | •             | •              | •          | •          | •            | •                 | •                 | •          | •           | •           | •          |  |

- excellent adhesion
- guaranteed adhesion with a few precautions (clean surfaces, pre-treated with primer and/or suitable application temperatures)
- poor adhesion

| GROUND BAND | BYTUM BAND | • PROTECT | BYTUM SPRAY | BYTUM LIQUID | FLUID MEMBRANE | EASY FOAM | HERMETIC FOAM | • FIRE FOAM | MS SEAL | FIRE SEALING ACRYLIC | FIRE SEALING SILICONE | NAIL PLASTER | NAIL BAND | BUTYL BAND | • FIRE STRIPE | SUPRA BAND | ALU BUTYL BAND | BLACK BAND | MANICA PLASTER | MANICA POST | MEMBRANE GLUE | ECO GLUE | SUPERB GLUE | OUTSIDE GLUE |
|-------------|------------|-----------|-------------|--------------|----------------|-----------|---------------|-------------|---------|----------------------|-----------------------|--------------|-----------|------------|---------------|------------|----------------|------------|----------------|-------------|---------------|----------|-------------|--------------|
| •           |            | •         | •           |              | •              |           | •             |             | •       |                      | •                     |              |           |            |               | •          |                |            |                | •           | •             |          |             | •            |
|             |            |           |             |              |                |           |               |             |         |                      |                       |              |           |            |               |            | _              |            |                |             |               |          |             |              |
| •           | •          | •         | •           |              | •              |           | •             |             | •       |                      | •                     | •            | •         |            | •             | •          | •              | •          | •              | •           | •             | •        | •           | •            |
| •           | •          | •         | •           |              | •              |           | •             |             | •       | •                    | •                     | •            | •         | •          | •             | •          | •              | •          | •              | •           | •             | •        | •           |              |
| •           | •          | •         | •           |              | •              | •         | •             | •           | •       | •                    | •                     | •            | •         | •          | •             | •          | •              | •          | •              | •           | •             | •        | •           | •            |
| •           | •          | •         | •           | •            | •              |           | •             |             | •       |                      | •                     | •            | •         |            | •             | •          | •              | •          | •              |             | •             |          | •           |              |
| •           | •          | •         | •           | •            | •              | •         | •             | •           | •       | •                    | •                     | •            | •         | •          | •             | •          | •              | •          | •              | •           | •             | •        | •           | •            |
| •           | •          | •         | •           | •            | •              | •         | •             | •           | •       | •                    | •                     | •            | •         |            | •             | •          | •              | •          | •              | •           | •             |          | •           | •            |
| •           | •          | •         | •           | •            | •              | •         | •             | •           | •       |                      | •                     | •            | •         | •          | •             | •          | •              | •          | •              | •           | •             | •        | •           | •            |
|             | •          | •         | •           | •            | •              | •         | •             | •           | •       |                      | •                     |              | •         |            | •             | •          | •              |            | •              | •           | •             | •        | •           | •            |
| •           | •          | •         | •           | •            | •              | •         | •             | •           | •       | •                    | •                     | •            | •         | •          | •             | •          | •              | •          | •              | •           | •             | •        | •           | •            |
| •           | •          | •         | •           | •            | •              | •         | •             | •           | •       |                      | •                     | •            | •         | •          | •             | •          | •              | •          | •              | •           | •             | •        | •           | •            |
|             | •          |           | •           | •            | •              |           | •             |             | •       | •                    | •                     |              | •         |            | •             | •          | •              |            | •              | •           | •             | •        | •           | •            |
|             | •          |           | •           | •            | •              |           | •             |             | •       | •                    | •                     |              | •         |            | •             | •          | •              |            | •              | •           | •             | •        | •           | •            |
|             | •          | •         | •           |              | •              | •         | •             | •           | •       | •                    | •                     | •            | •         | •          | •             |            | •              |            | •              | •           | •             | •        | •           | •            |
| •           |            | •         |             | •            | •              | •         | •             | •           | •       | •                    | •                     | •            | •         | •          | •             | •          | •              | •          | •              | •           | •             |          | •           |              |

# **BUTYL PRODUCTS**

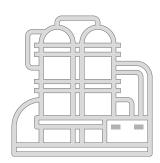
### WHAT THEY ARE MADE OF AND WHERE THEY COME FROM

Butyl products are made from compounds of butyl rubber, a high-quality synthetic material with excellent elastic, thermal and durability properties.

The butyl product is a synthetic material obtained through a polymerisation reaction of molecules (monomers) from oil refining.

Rothoblaas offers: BUTYL BAND, SUPRA BAND, PROTECT, BLACK BAND, TERRA BAND UV, ALU BUTYL BAND, NAIL BAND, MANICA PLASTER, OUTSIDE GLUE, ALU FLASH CONNECT, SOFT FLASH CONNECT, MANICA ROLL.

### REFINING TOWER











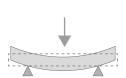
**MONOMERS** + CHEMICAL REACTION



Polymerisation is a chemical reaction which, starting from small simple molecules (monomers), produces a much longer so-called "polymer chain" consisting of identical molecules repeated in sequence. In this way it is possible to create materials with the desired properties.

### **PROPERTIES**

Butyl is a material specially synthesised to achieve specific properties. It is particularly suitable for many applications in the construction industry, where adhesion, ageing resistance, stability at high temperatures and flexibility at low temperatures are key requirements. For these reasons, a butyl product is preferable to a bituminous product.



### **FLEXIBILITY**

the chemical structure of these products makes them very flexible



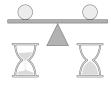
### **HARDNESS**

butyl products are specially designed for the desired application and do not require the addition of mineral fillers



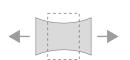
### **RESISTANCE TO UV**

this type of product is scarcely affected by ultraviolet radiation



### **AGEING**

butyl compounds are very stable over time



### **ELASTICITY**

butyl compounds are intrinsically elastic



### THERMAL STABILITY

butyl products are stable over a very wide temperature range: -30 +90°C

# BITUMINOUS PRODUCTS

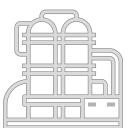
### WHAT THEY ARE MADE OF AND WHERE THEY COME FROM

Bitumen is a mixture of different substances, which is particularly suitable for combining with other materials to improve their mechanical and thermal properties.

Bitumen itself is a solid black mass which, in the case of tapes and membranes, is mixed with inorganic fillers (calcium carbonate and silica) and polymers to obtain a mix, possibly also adhesive, with the desired properties. Bitumen has two origins: a natural and an artificial one. What is used industrially is artificial bitumen.

Rothoblaas offers: BYTUM 400, BYTUM 750, BYTUM 1100, BYTUM 1500, BYTUM 2000, BYTUM BASE 2500, BYTUM SLATE 3500, SHINGLE, GROUND BAND, BYTUM BAND, BYTUM LIQUID, BYTUM SPRAY.

### **REFINING TOWER**



### NATURAL ASPHALT LAKE







BITUMEN + OILS + POLYMERS + MINERAL FILLERS

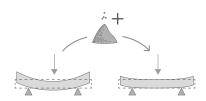


BITUMINOUS COMPOUND

Bituminous products are a mixture of different ingredients. Although bitumen is the major component, the final properties are more similar to those of the polymer (present in smaller quantities in the bituminous compound). A bit like mayonnaise, which is mostly made of oil but whose consistency is more like that of eggs, which are present in a smaller proportion. This is possible thanks to a special production process.

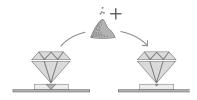
### **PROPERTIES**

The properties of bituminous products depend on the presence of each "ingredient". The complex composition of bitumen influences its stability over time.



### **FLEXIBILITY**

bitumen is very flexible; however, the presence of the mineral filler reduces its flexibility



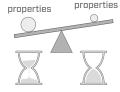
### **HARDNESS**

the hardness of the product is mainly due to the mineral fillers



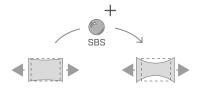
### **UV RESISTANCE**

the mineral part of the mixture protects it from ultraviolet radiation. Stone chips can cover the surface, protecting it



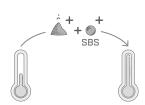
### **AGEING**

bituminous products are more prone to ageing, which reduces its properties, and over time the oils in the bitumen tend to migrate



### **ELASTICITY**

bitumen is a material with poor mechanical properties. For this reason it is modified by adding polymers such as SBS (styrene-butadiene-styrene)



### THERMAL STABILITY

bitumen appears as a solid over a very narrow temperature range. The thermal stability range may vary depending on the ingredients added

# I RADON, AN UNWANTED HOUSE GUEST



Radon is a noble radioactive gas that occurs in nature. It is highly volatile and tends to rise. It is odourless, making it difficult to perceive when concentrated inside of residences, and can have dangerous consequences if inhaled.

### AN INSIDIOUS GAS



low high

### **CONCENTRATION**

Map provided for illustrative purposes only. Always check for updates.

Radon is found throughout the Earth's crust, in varying quantities. Since it is a gas, it moves through openings in the ground, dispersing into the air or water. In the open it never reaches dangerous concentrations but, in closed areas (houses, offices, schools, etc.), it can arrive at values that create serious health risks. Threshold values are defined under international rules, which are then implemented by the relative national bodies.

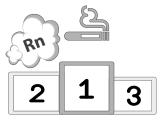
### WHERE IS IT FOUND?







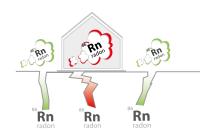
A VERY DANGEROUS SUBSTANCE



This gas is found in the subsoil, in rock and in water. In the same way that it moves through the ground, it can pass through construction materials and enter the house. Proper airing out of rooms can be useful to fight accumulation, but is often insufficient.

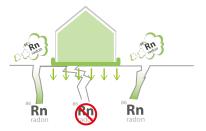
As early as 1988, the World Health Organisation (WHO), through the International Agency for Research on Cancer (IARC), listed radon as a human carcinogen. Inhalation of radon gas increases the risk of health damage, in particular the risk of lung cancer.

### **HOW IT SPREADS**



Radon becomes dangerous when it accumulates inside of the home. Today, with increased awareness of low energy consumption buildings (which increase airtightness) and the relative decrease in natural ventilation, the risk of radon is greater than ever.

### THE IMPORTANCE OF GOOD DESIGN

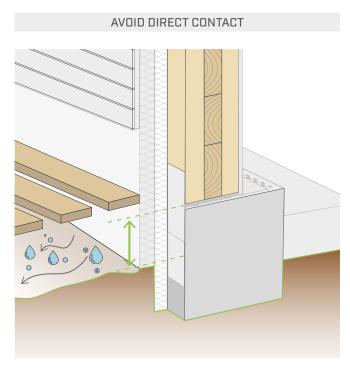


It is possible to minimise the presence of radon in homes through the use of specific sheaths and materials designed to reduce the permeability of the outer structures and foundation of the building. The market offers a number of solutions. There are many solutions on the market, such as RADON FLOOR and GROUND BAND, foundation barriers that prevent radon from reaching indoor environments, eliminating health risks.

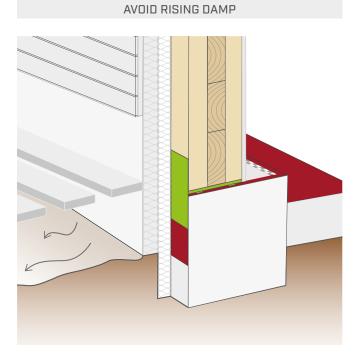
# CONNECTION TO THE GROUND

The connection to the ground is undoubtedly one of the most delicate points in a timber construction, which is why it is essential to design and implement this construction detail carefully.

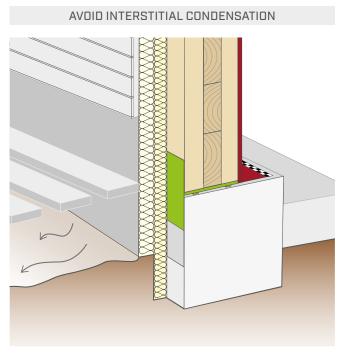
The proposed recommendations refer to the different national standards (DIN 68800-2, ÖNORM B 2320 and FLA guide) that promote passive node protection by ensuring the absence of water and moisture at the base of the building.



In order to avoid the contact of the base of the building with wet soil, the timber structure must be installed at a higher level than the water drainage.



In order to prevent the migration of moisture from the concrete to the timber wall, an impermeable barrier must be placed between the concrete and the timber structure.



It is often one of the coldest points in the building, so it is important to solve the thermal bridge and ensure air tightness.

### THE LAW OF THE 4 D

### DEFLECTION

Rain deflection through design choices that tend to minimise the impact of rainwater on the casing (sloping roofs, eaves, flashings, etc.).

### DRAINAGE

Design a drainage path with the aim of removing water from the building as quickly as possible (draining soil, slope layers, etc.).

### DRYING

In properly designed buildings, water has a chance to evaporate and moisture can escape from the layers.

### **D**URABLE MATERIALS

At those nodes that are not in line with the other 3 principles, the use of durable materials should be considered in the design.

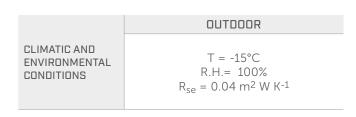
# **GROUND CONNECTION WITH ALU START**

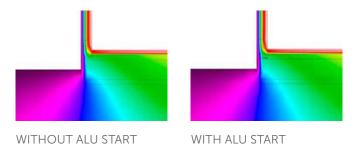
### CALCULATION OF THE THERMAL BRIDGE OF THE GROUND NODE WITH ALU START

With this study, several construction details involving the use of ALU START in the ground node were analysed.

|               | INTERNAL  |
|---------------|---|
| CLIMATIC AND  | T= 20°C   |
| ENVIRONMENTAL | R.H.= 50%   |
| CONDITIONS    | R <sub>si</sub> = 0.13 m <sup>2</sup> W K <sup>-1</sup> |

The analysis was carried out using a finite element node calculation programme in accordance with ISO 13788:2012.





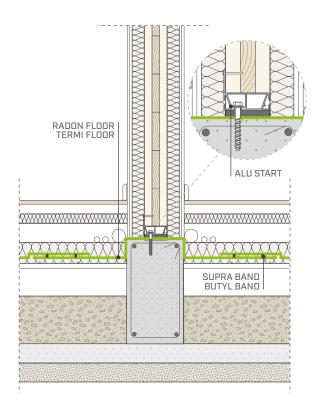
In this project, different configurations were studied and it was found that the temperature distribution is not significantly affected by the presence of ALU START.

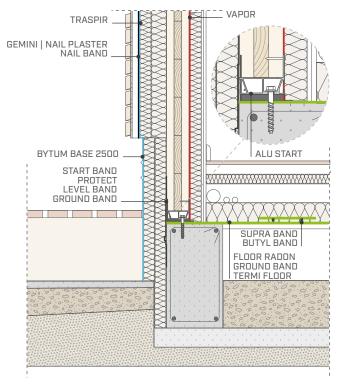
### INTERIOR WALL WITH ALU START

CLT (CROSS LAMINATED TIMBER) WITHOUT FOUNDATION **AERATION** 

### PERIMETER WALL WITH ALU START

CLT (CROSS LAMINATED TIMBER) WITHOUT FOUNDATION **AERATION** 





# SEPARATING ELEMENTS TO MAKE THEM LIVE A LIFE TOGETHER



The ALU START profile eliminates contact between the timber panels and the concrete substructure, providing protection against rising damp and ensuring excellent durability of the building's ground connection. It is the first ground connection system that eliminates hold-downs and shear angles. Made of aluminium alloy, the ALU START system can be used with CLT or timber frame walls.



Scan the QR code and discover the technical features of ALU START







# **I START BAND**

### WATERPROOFING PROFILE WITH HIGH MECHANICAL RESISTANCE

### **ELASTICITY**

Thanks to its elasticity, it is extremely easy to install even around corners and it is resistant to perforations or mechanical fastening.

### **DURABILITY**

It is compatible with bitumen, it does not degrade and it is UV-resistant. It is resistant to walking wear and cold temperatures.

### COMPOSITION

support EPDM-based synthetic rubber



START BAND ADHESIVE

### ■ TECHNICAL DATA

| Properties                               | standard   | value                 | USC conversion |
|--|------------|-----------------------|----------------|
| Tensile strength                         | DIN 53504  | ≥ 6,5 MPa             | -              |
| Resistance to tearing                    | DIN 53504  | ≥ 25 kN/m             | ≥ 2.86 lbf/in  |
| Elongation                               | DIN 53504  | ≥ 300%                | -              |
| Dimensional tolerance                    | DIN 7715-5 | conforming (class P3) | -              |
| Reaction to fire                         | EN 13501-1 | class E               | -              |
| Resistance to UV and resistance to ozone | DIN 7864-1 | conforming            | -              |
| Water vapour resistance factor (μ)       | EN 1931    | 32000                 | 128 MN·s/g     |
| Temperature resistance                   | -          | -30 / +100 °C         | -22 / +212 °F  |

<sup>&</sup>lt;sup>(1)</sup>Store the product in a dry, covered location. Waste classification (2014/955/EU): 17 02 03.

### CODES AND DIMENSIONS

|   | CODE      | В    | s    | L   | В    | S     | L    |   |
|---|-----------|------|------|-----|------|-------|------|---|
|   |           | [mm] | [mm] | [m] | [in] | [mil] | [ft] |   |
|   | START100  | 100  | 0,8  | 25  | 3.9  | 32    | 82   | 6 |
| 1 | START150  | 150  | 0,8  | 25  | 5.9  | 32    | 82   | 4 |
| ı | START200  | 200  | 0,8  | 25  | 7.9  | 32    | 82   | 3 |
|   | START250  | 250  | 0,8  | 25  | 9.8  | 32    | 82   | 2 |
| 2 | STARTA120 | 120  | 0,6  | 20  | 4.7  | 24    | 66   | 6 |
|   | STARTA160 | 160  | 0,6  | 20  | 6.3  | 24    | 66   | 6 |

### ■ FIELDS OF APPLICATION









### ■ RELATED PRODUCTS



CUTTER page 328



PRIMER SPRAY page 102



HAMMER STAPLER 22 page 330



### WIDE RANGE, INCLUDING **ADHESIVE**

Also available in an adhesive version (STAR-TA120 and STARTA160), ideal when applied in combination with ALU START, for an infallible connection to the ground.

### **SAFETY**

It protects walls and foundation walls against rising damp over time, even at extreme temperatures. Also suitable as a general sealing wall barrier.

# **CONNECT BAND**

### SEALING WALL BARRIER FOR IRREGULAR **SUBSTRATES**

### **DOUBLE PROTECTION**

It protects timber from rising damp and ensures excellent airtightness.

### **ADJUSTABLE**

Adhesive PU foam profiles make it possible to compensate for any irregularities in the foundation.



### ■ TECHNICAL DATA

| Properties                         | standard   | value  | USC conversion   |
|------------------------------------|------------|--|------------------|
| Tensile strength                   | DIN 53504  | ≥ 6,5 MPa  | -                |
| Resistance to tearing              | DIN 53504  | $\geq$ 25 kN/m <sup>2</sup>  | 1713.04 lbf/ft   |
| Elongation                         | DIN 53504  | ≥ 300%   | -                |
| Air permeability                   | EN 12114   | $\alpha < 0.1 \text{ m}^3/(\text{h}\cdot\text{m}\cdot(\text{daPa})^{\text{n}}$ | -                |
| Thermal conductivity (λ)           | DIN 52612  | 0,042 W/m·K  | 0.02 BTU/h·ft·°F |
| Reaction to fire                   | EN 13501-1 | class E  | -                |
| Resistance to UV and ozone         | -          | permanent  | -                |
| Water vapour resistance factor (μ) | EN 1931    | approx. 32000  | -                |
| Watertightness                     | EN 13984   | permanent  | -                |
| Temperature resistance             | -          | -30 / +100 °C  | -22 / +212 °F    |
| Application temperature            | -          | +5 / +35 °C  | +41 / +95 °F     |
| Storage temperature (1)            | -          | +1 / +25 °C  | +33.8 / +77 °F   |
| Solvents                           | -          | no   | -                |
| VOC emissions                      | -          | < 1 µg/m³  | -                |

<sup>(1)</sup> Store the product in a dry, covered location.

### CODES AND DIMENSIONS

| CODE       | В    | S    | L   | В    | S     | L    |   |
|------------|------|------|-----|------|-------|------|---|
|            | [mm] | [mm] | [m] | [in] | [mil] | [ft] |   |
| CONNECT100 | 100  | 0,8  | 25  | 3.9  | 32    | 82   | 1 |
| CONNECT250 | 250  | 0,8  | 25  | 9.8  | 32    | 82   | 1 |



### WIDE RANGE

Available in two versions for use with different wall thickness values.

### **DURABLE TIGHTNESS**

Extremely thermostable and flexible even at low temperatures. Compatible with bitumen and major building materials.

# **LEVEL BAND**



### SEALING WALL BARRIER FOR FOUNDATIONS

### WATERPROOF

It effectively resists humidity due to capillary action, while offering excellent resistance to water, air and wind.

### **VERSATILE**

Available in three versions: ideal both as a wall barrier and to seal vertical wall - wall joints.



| 1 | Ø10   | 25  | 75 25 |
|---|-------|-----|-------|
| 3 | 0     |     | 1     |
|   | 25 75 | 250 |       |

### ■ TECHNICAL DATA

| Properties                             | standard          | value                           | USC conversion                       |
|--|-------------------|---------------------------------|--------------------------------------|
| Maximum tensile force MD/CD            | EN 12311-2        | ≥ 20 / ≥ 20 N/mm <sup>2</sup>   | ≥ 2.9 / ≥ 2.9 lbf/mil <sup>2</sup>   |
| Elongation MD/CD                       | EN 12311-2        | ≥ 550 / ≥ 600 %                 | -                                    |
| Resistance to nail tearing MD/CD       | EN 12310-1        | ≥ 120 / ≥ 120 N/mm <sup>2</sup> | ≥ 17.4 / ≥ 17.4 lbf/mil <sup>2</sup> |
| Watertightness                         | EN 1928           | conforming                      | -                                    |
| Reaction to fire                       | EN 13501-1        | class E                         | -                                    |
| Watertightness after artificial ageing | EN 1296 - EN 1931 | conforming                      | -                                    |
| Alkaline water vapour resistance       | EN 1847 - EN 1931 | conforming                      | -                                    |
| Impact resistance                      | EN 12691          | > 500 mm                        | -                                    |
| Bendability at low temperatures        | EN 495-5          | -30 °C                          | -22 °F                               |
| Temperature resistance                 | -                 | -40 / +80 °C                    | -40 / +176 °F                        |
| Storage temperature <sup>(1)</sup>     | -                 | +5 / +25 °C                     | +41 / +77 °F                         |

<sup>&</sup>lt;sup>(1)</sup>Store the product in a dry, covered location. Waste classification (2014/955/EU): 17 02 03.

### CODES AND DIMENSIONS

| CODE       | В    | s    | L   | В    | S     | L    |    |
|------------|------|------|-----|------|-------|------|----|
|            | [mm] | [mm] | [m] | [in] | [mil] | [ft] |    |
| 1 LEVEL085 | 85   | 0,17 | 25  | 3.4  | 7     | 82   | 10 |
| 2 LEVEL125 | 125  | 0,17 | 25  | 4.9  | 7     | 82   | 2  |
| 3 LEVEL350 | 350  | 0,17 | 25  | 13.8 | 7     | 82   | 2  |



### **ADJUSTABLE**

The soft and elastic polyethylene profile allows it to be installed even in complex shapes and angles.

### COST-PERFORMANCE

The choice of materials and optimisation in production results in a solution that offers a good balance between performance and cost.

# I GROUND BAND

### SELF-ADHESIVE BITUMINOUS MEMBRANE







### LOW TEMPERATURES

Can be installed at temperatures from +5 °C to +30 °C thanks to the special elastoplastomeric bituminous mixture. It remains flexible down to -30 °C.

### SELF-SEALING AND SELF-ADHESIVE

Practical and fast installation, no flames are required, minimising risks for the wood.



### COMPOSITION

release liner

silicone coated paper

black adhesive bituminous compound

high density cross-laminated PE film

### CODES AND DIMENSIONS

| CODE       | liner     | В    | s    | L   | liner       | В    | S     | L    |   |
|------------|-----------|------|------|-----|-------------|------|-------|------|---|
|            | [mm]      | [mm] | [mm] | [m] | [in]        | [in] | [mil] | [ft] |   |
| GROUND200  | 30 / 170  | 200  | 1,5  | 20  | 1.2 / 6.7   | 7.9  | 59    | 66   | 2 |
| GROUND500  | 30 / 470  | 500  | 1,5  | 20  | 1.2 / 18.5  | 19.7 | 59    | 66   | 1 |
| GROUND1000 | 500 / 500 | 1000 | 1,5  | 20  | 19.7 / 19.7 | 39.4 | 59    | 66   | 1 |



### PROTECTION AGAINST RADON AND METHANE

The product is tested for protection against radon and methane gas, which are harmful to health in the case of high concentrations in indoor environments.

### PRE-CUT LINER

All versions are supplied with the liner pre-cut to facilitate installation in corners or complex locations, but also over large areas to avoid excessive misalignment of the layers.

### ■ TECHNICAL DATA

| Properties                         | standard   | value                                   | USC conversion       |
|------------------------------------|--|---|----------------------|
| Maximum tensile force MD/CD        | EN 12311-1   | 215 / 220 N/50 mm                       | -                    |
| Elongation at break point MD/CD    | EN 12311-1   | 310 / 240%                              | -                    |
| Impact resistance Met.A/Met.B      | EN 12691   | 500 / 1000 mm                           | 19.69 / 39.37 in     |
| Static load resistance Met.A/Met.B | EN 12730   | 10 / 15 kg                              | 350 / 530 oz         |
| Resistance to tearing MD/CD        | EN 12310-1   | 135 / 135 N                             | 30.35 / 30.35 lbf    |
| Joint separation resistance MD/CD  | EN 12316-1   | 100 N/50 mm                             | 11.42 lbf/in         |
| Maximum tensile force MD/CD        | EN 12317-1   | 300 / 250 N/50 mm                       | 36.54 / 28.55 lbf/in |
| Initial Tack                       | ASTM D 2979  | 3,5 N                                   | 0.79 lbf             |
| Adhesion on timber                 | ASTM D 1000  | 233 N/50 mm                             | 26.61 lbf/in         |
| Adhesiveness on concrete           | ASTM D 1000  | 165 N/50 mm                             | 18.84 lbf/in         |
| Watertightness                     | EN 1928  | ≥ 60 KPa                                | -                    |
| Watertightness after ageing Met.A  | EN 1296 / EN 1928                                  | conforming                              | -                    |
| Water vapour resistance factor (µ) | EN 1931  | approx. 110000                          | approx. 825 MN·s/g   |
| Water absorption                   | ASTM D 570   | 0,09%                                   | -                    |
| Resistance to hydrostatic pressure | DIN 52123  | > 6 bar (24 h)                          | -                    |
| Reaction to fire                   | EN 13501-1   | class E                                 | -                    |
| Radon permeability                 | SP Swedish Nat.<br>Testing & Research<br>Institute | 5,7·10 <sup>-12</sup> m <sup>2</sup> /s | -                    |
| Methane permeability               | CSI test method                                    | < 5 cc/m <sup>2</sup> ·24·atm           | -                    |
| Flexibility at low temperatures    | EN 1109  | -30 °C                                  | -22 °F               |
| Temperature resistance             | -  | -40 / +80 °C                            | -40 / +176 °F        |
| Application temperature            | -  | -4 / +30 °C                             | +24.8 / +86 °F       |
| Storage temperature <sup>(1)</sup> | -  | +5 / +40 °C                             | +41 / +104 °F        |
| Solvents                           | -  | no                                      | -                    |
| VOC emissions                      | ISO 16000  | 8 μg/m <sup>3</sup>                     | -                    |

(1) Store the product in a cool, dry place for no more than 12 months. The rolls must be transported and stored in a vertical position. It is recommended to store the product at room temperature until application, as it is sensitive to temperature changes. We recommend applying it during the cooler hours in summer and the warmer hours in winter, possibly with the help of a hot air gun. Waste classification (2014/955/EU): 17 03 02.

### RELATED PRODUCTS



BYTUM LIQUID page 48



BLACK BAND page 136



ROLLER page 326



HAMMER STAPLER 47 page 330



### **SAFETY**

The special elastoplastomeric bituminous compound and the cross-laminated high-density polyethylene backing film make the product completely waterproof and resistant to punching shear.

### ■ RECOMMENDATIONS FOR INSTALLATION

### WATERPROOFING CLT WALL ON CONCRETE KERB

















- 1 HERON, HERON XL, HERON DGT, COSMOS, CHAMELEON, POWDER
- **3a** BYTUM LIQUID, BYTUM SPRAY, BRUSH
- **5** HAMMER STAPLER 47, HAMMER STAPLER 22, HAND STAPLER, STAPLES





8 ROLLER

#### WATERPROOFING AND RADON PROTECTION OF FOUNDATIONS













### I RADON FLOOR



#### WATERPROOFING RADON GAS BARRIER FOR **FOUNDATIONS**



#### COMPOSITION

top layer low density PE film reinforcing layer

polyester reinforcing grid

middle layer low density PE film

bottom layer low density PE film



#### **■ TECHNICAL DATA**

| Properties                             | standard  | value                                    | USC conversion                  |
|--|---|--|---------------------------------|
| Mass per unit area                     | EN 1849-2                                       | 350 g/m <sup>2</sup>                     | 1.15 oz/ft <sup>2</sup>         |
| Thickness                              | EN 1849-1                                       | 0.4 mm                                   | 16 mil                          |
| Water vapour transmission (Sd)         | EN 1931   | 232 m                                    | 0.015 US perm                   |
| Maximum tensile force MD/CD            | EN 12311-1                                      | > 450 / 420 N/50mm                       | 51 / 48 lb/in                   |
| Elongation MD/CD                       | EN 12311-1                                      | > 12 / 12 %                              | -                               |
| Resistance to nail tearing MD/CD       | EN 12310-1                                      | > 300 / 300 N                            | > 67 / 67 lbf                   |
| Watertightness                         | EN 1928   | conforming                               | -                               |
| Temperature resistance                 | -   | -40 / 80 °C                              | -40 / 176 °F                    |
| Reaction to fire                       | EN 13501-1                                      | class F                                  | -                               |
| Resistance to penetration of air       | EN 12114  | 0 m <sup>3</sup> /(m <sup>2</sup> h50Pa) | 0 cfm/ft <sup>2</sup> at 50Pa   |
| Thermal conductivity (λ)               | -   | 0,4 W/(m·K)                              | 0.23 BTU/h·ft·°F                |
| Specific heat                          | -   | 1800 J/(kg·K)                            | -                               |
| Density                                | -   | approx. 875 kg/m <sup>3</sup>            | approx. 0.51 oz/in <sup>3</sup> |
| Water vapour resistance factor $(\mu)$ | -   | approx. 580000                           | approx. 1160 MN·s/g             |
| Joint strength                         | EN 12317-2                                      | > 50 N/50mm                              | > 5.71 lb/in                    |
| Impact resistance                      | EN 12691  | > 200 mm                                 | > 7.87 in                       |
| Flexibility at low temperatures        | EN 1109   | -20 °C                                   | -4 °F                           |
| Resistance to static load              | -   | 200 N                                    | 44.96 lbf                       |
| Radon permeability                     | SP Swedish Nat. Testing<br>& Research Institute | < 1x10 <sup>-11</sup> m <sup>2</sup> /s  | -                               |
| Radon transmittance                    | SP Swedish Nat. Testing<br>& Research Institute | < 2x10 <sup>-8</sup> m/s                 | -                               |

Waste classification (2014/955/EU): 17 02 03.

| CODE     | Н   | L   | А       | Н    | L    | А                  |    |
|----------|-----|-----|---------|------|------|--------------------|----|
|          | [m] | [m] | $[m^2]$ | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| RADON350 | 2   | 25  | 50      | 7    | 82   | 538                | 42 |

#### ■ RECOMMENDATIONS FOR INSTALLATION













- 1 SUPRA BAND, BUTYL BAND
- **3a** SUPRA BAND, BUTYL BAND, OUTSIDE GLUE ROLLER
- 4 MARLIN, CUTTER
- 5 GROUND BAND

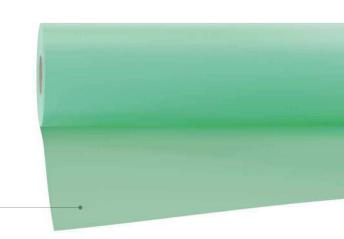
### I TERMI FLOOR



# WATERPROOFING ANTI-TERMITE BARRIER FOR FOUNDATIONS



single layer low density PE film



#### ■ TECHNICAL DATA

| Properties                       | standard             | value  | USC conversion                  |
|----------------------------------|----------------------|--|---------------------------------|
| Mass per unit area               | EN 1849-2            | 150 g/m <sup>2</sup>                                 | 0.49 oz/ft <sup>2</sup>         |
| Thickness                        | EN 1849-1            | 0,15 mm  | 6 mil                           |
| Maximum tensile force MD/CD      | EN 12311-1           | 15 / 15 N/50mm                                       | 2 / 2 lb/in                     |
| Elongation MD/CD                 | EN 12311-1           | 350 / 450 %  | -                               |
| Resistance to nail tearing MD/CD | EN 12310-1           | 40 / 40 N  | 9 / 9 lbf                       |
| Watertightness                   | EN 1928              | conforming   | -                               |
| Temperature resistance           | -                    | -40 / 80 °C  | -40 / 176 °F                    |
| Reaction to fire                 | EN 13501-1           | class F  | -                               |
| Resistance to penetration of air | EN 12114             | $> 0.02 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | > 0.001 cfm/ft² at 50Pa         |
| Thermal conductivity $(\lambda)$ | -                    | 0,4 W/(m·K)  | 0.23 BTU/h·ft·°F                |
| Specific heat                    | -                    | 1800 J/(kg·K)  | -                               |
| Density                          | -                    | approx. 1000 kg/m <sup>3</sup>                       | approx. 0.58 oz/in <sup>3</sup> |
| Impact resistance                | EN 12691             | 200 mm   | 7.87 in                         |
| Resistance to static load        | -                    | 5 N  | 1.12 lbf                        |
| Water vapour resistance:         |                      |  |                                 |
| - in the presence of alkalis     | EN 1847 / EN 12311-2 | conforming   | -                               |
| - after artificial ageing        | EN 1296 / EN 1931    | conforming   | -                               |
| Action against termites          | FCBA (401/10/222F/d) | > 20 years   | -                               |

Waste classification (2014/955/EU): 17 02 04.

| CODE     | roll       | Н   | L   | Α       | Н    | L    | Α                  |    |
|----------|------------|-----|-----|---------|------|------|--------------------|----|
|          | [m]        | [m] | [m] | $[m^2]$ | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| TERMI150 | 1,0 x 12,5 | 3   | 25  | 75      | 10   | 82   | 807                | 12 |

#### ■ RECOMMENDATIONS FOR INSTALLATION

















- **3a** SUPRA BAND, BUTYL BAND, OUTSIDE GLUE
- 3b EASY BAND, SPEEDY BAND, FLEXY BAND, FLEXI BAND UV, PLASTER BAND, MANICA PLASTER
- OUTSIDE GLUE, SUPRA BAND, BUTYL BAND FLY, FLY SOFT
- 4b PRIMER, PRIMER SPRAY ROLLER

### BYTUM BAND

# SELF-ADHESIVE BITUMINOUS BAND, CAN BE PLASTERED



#### **CAN BE PLASTERED**

Polypropylene means the fabric can be plastered, offering greater versatility.

#### **COST - PERFORMANCE**

The bituminous mixture guarantees good adhesiveness, even on concrete.

#### COMPOSITION

release liner silicone coated paper

glue

black adhesive bituminous compound

support

non-woven PP fabric

#### ■ TECHNICAL DATA

| Properties                                     | standard           | value                 | USC conversion             |
|--|--------------------|-----------------------|----------------------------|
| Maximum tensile force MD/CD                    | EN 12311-1         | 140 / 105 N           | 31.47 / 23.6 lbf           |
| Elongation at break point MD/CD                | EN 12311-1         | 100 / 100 %           | -                          |
| Adhesion on concrete                           | ASTM D 1000        | 2,9 N/mm              | 16.56 lbf/in               |
| Adhesion of class C2E cementitious glue on TNT | EN 12004 / EN 1348 | 0,9 N/mm <sup>2</sup> | 130.53 lbf/in <sup>2</sup> |
| Reaction to fire                               | DIN 4102           | class B2              | -                          |
| Temperature resistance                         | -                  | -20 / +80 °C          | -4 / +176 °F               |
| Application temperature                        | -                  | +5 / +40 °C           | +41 / +104 °F              |
| Storage temperature <sup>(1)</sup>             | -                  | +5 / +40 °C           | +41 / +104 °F              |
| VOC emissions                                  | ISO 16000          | 8 μg/m <sup>3</sup>   | -                          |

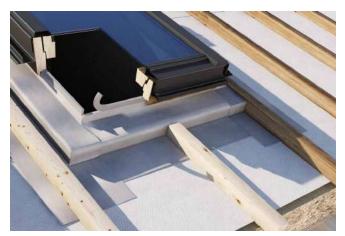
 $<sup>^{(1)}</sup>$ Store the product in a cool, dry place for no more than 12 months.

It is recommended to store the product at room temperature until application, as it is sensitive to temperature changes. We recommend applying it during the cooler hours in summer and the warmer hours in winter, possibly with the help of a hot air gun. Waste classification (2014/955/EU): 17 03 02.

| CODE       | В    | s    | L   | В    | S     | L    |   |
|------------|------|------|-----|------|-------|------|---|
|            | [mm] | [mm] | [m] | [in] | [mil] | [ft] |   |
| BYTBAND240 | 240  | 1    | 15  | 9.5  | 39    | 49   | 2 |
| BYTBAND370 | 370  | 1    | 15  | 14.6 | 39    | 49   | 1 |







#### ■ RELATED PRODUCTS



BYTUM LIQUID page 48



BYTUM SPRAY page 46



HAMMER STAPLER 22 page 330



#### **VERY LOW EMISSIONS**

Thanks to the special formulation of the bituminous compound, it guarantees health safety with regard to emissions.

#### **SAFETY**

It protects walls and foundation walls against rising damp over time. Also suitable as a general sealing wall barrier or window/door node waterproofing product.

### **I PROTECT**









#### **BUTYL MIX**

The special mix guarantees excellent adhesion and deformation capacities, compensating for the natural movement of the timber.

#### LOW TEMPERATURES

The butyl guarantees excellent adhesion to the supports also under difficult environmental conditions.

#### COMPOSITION

release liner PP film

glue

grey adhesive butyl compound

support

non-woven PP fabric



#### ■ TECHNICAL DATA

| Properties                                     | standard           | value                 | USC conversion             |
|--|--------------------|-----------------------|----------------------------|
| Maximum tensile force MD/CD                    | EN 12311-1         | 115 / 100 N           | 25.85 / 22.48 lbf          |
| Elongation at break point MD/CD                | EN 12311-1         | 100 / 100 %           | -                          |
| Peel adhesion at 180°                          | ASTM D 1000        | 20 N/cm               | 11.42 lbf/in               |
| Initial Tack                                   | ASTM D 2979        | 8 N                   | -                          |
| Resistance to tearing MD/CD                    | EN 12310           | ≥ 130 / ≥ 125 N       | ≥ 29.23 / ≥ 28.10 lbf      |
| Joint separation resistance MD/CD              | EN 12316-1         | ≥ 20 N/50 mm          | ≥ 2.28 lbf/in              |
| Maximum tensile force MD/CD                    | EN 12317-1         | ≥ 100 / ≥ 75 N/50 mm  | n ≥ 11.42 / ≥ 8.57 lbf/in  |
| Adhesion of class C2E cementitious glue on TNT | EN 12004 / EN 1348 | 0,9 N/mm <sup>2</sup> | 130.53 lbf/in <sup>2</sup> |
| Vertical sliding                               | ISO 7390           | 0 mm                  | -                          |
| Reaction to fire                               | EN 13501-1         | class E               | -                          |
| Temperature resistance                         | -                  | -30 / +90 °C          | -22 / 194 °F               |
| Watertightness                                 | EN 1928            | conforming            | -                          |
| Water vapour resistance factor (μ)             | EN 1931            | approx. 26176         | approx. 130 MN·s/g         |
| Application temperature                        | -                  | 0 / +40 °C            | +32 / 104 °F               |
| Storage temperature <sup>(1)</sup>             | -                  | +5 / +40 °C           | +41 / 104 °F               |
| VOC emissions                                  | ISO 16000          | 30 μg/m <sup>3</sup>  | -                          |
| French VOC classification                      | ISO 16000          | A+                    | -                          |

<sup>(1)</sup> Store the product in a cool, dry place for no more than 12 months.

It is recommended to store the product at room temperature until application, as it is sensitive to temperature changes. We recommend applying it during the cooler hours in summer and the warmer hours in winter, possibly with the help of a hot air gun. Waste classification (2014/955/EU): 08 04 10

| CODE       | В    | s    | L   | В    | S     | L    |   |
|------------|------|------|-----|------|-------|------|---|
|            | [mm] | [mm] | [m] | [in] | [mil] | [ft] |   |
| PROTECT330 | 330  | 1    | 10  | 13.0 | 39    | 33   | 2 |
| PROTECT500 | 500  | 1    | 10  | 19.7 | 39    | 33   | 1 |







#### ■ RELATED PRODUCTS



MANICA PLASTER page 138

| CODE        | liner    | В    | s    | L   | liner     | В    | S     | L    |   |
|-------------|----------|------|------|-----|-----------|------|-------|------|---|
|             | [mm]     | [mm] | [mm] | [m] | [in]      | [in] | [mil] | [ft] |   |
| MANPLA2080  | 20 / 80  | 100  | 1    | 20  | 0.8 / 3.2 | 3.9  | 39    | 66   | 6 |
| MANPLA20180 | 20 / 180 | 200  | 1    | 20  | 0.8 / 7.1 | 7.9  | 39    | 66   | 2 |



#### ADHESION

The special butyl mix ensures high adhesion even at low temperatures. Durable and thermally stable.

#### **CAN BE PLASTERED**

The non-woven polypropylene fabric means the support can be plastered, offering greater versatility of use.

### BYTUM SPRAY

#### BITUMINOUS MEMBRANE SEALANT SPRAY

#### **DURABLE PROTECTION**

The product remains flexible and seals cracks and elements by blocking water and dust infiltration.

#### WEATHER RESISTANCE

The special elastomer-modified bituminous formula guarantees a product that after drying resists both weathering and salt corrosion.





#### TECHNICAL DATA

| Properties                                       | value            | USC conversion        |
|--|------------------|-----------------------|
| Colour   | black            | -                     |
| Time required for complete drying 23 °C / 50% RH | 1 - 2 h          | -                     |
| Yield  | 4 m <sup>2</sup> | 43.06 ft <sup>2</sup> |
| Application temperature                          | +5 / +35 °C      | +41 / +95 °F          |
| Storage temperature <sup>(1)</sup>               | +10 / +30 °C     | +50 / +86 °F          |

(1) Store the product in a dry, covered location for no more than 24 months. Check the expiry date on the packaging. Waste classification (2014/955/EU): 16 05 04. Aerosol 1. Skin Irrit. 2. STOT SE 3. Aquatic Chronic 2.

#### CODES AND DIMENSIONS

| CODE | content | content    |    |
|------|---------|------------|----|
|      | [mL]    | [US fl oz] |    |
| BYTS | 500     | 16.90      | 12 |



#### **UNIVERSAL**

Suitable for all types of support, it adheres to all types of shapes including roofs, gutters, terraces, skylights, PVC or metal drainpipes.

#### **FAST INSTALLATION**

The product is supplied in a convenient resealable, ready-to-use spray which can be applied without the need for additional tools.

#### ■ RECOMMENDATIONS FOR INSTALLATION

#### SEALING OF CRACKS AND CROSSING POINTS









1 BYTUM REINFORCEMENT

#### FASTENING SYSTEMS WATERPROOFING









## | BYTUM LIQUID | REINFORCEMENT



### SPREADABLE WATERPROOFING SHEATH | REINFORCING LAYER







#### ■ TECHNICAL DATA

| Properties                                      | standard   | value                 | USC conversion     |
|---|------------|-----------------------|--------------------|
| Apparent volume mass of mix                     | EN 1015-6  | 1,5 kg/L              | -                  |
| Maximum application thickness                   | -          | 3 mm                  | 118 mil            |
| Variable water vapour transmission (Sd)         | EN 1931    | 5 / 50 m              | 0.7 / 0.07 US perm |
| Watertightness                                  | EN 1928    | > 500 kPa             | -                  |
| Elongation MD/CD                                | EN 12311-1 | 240 %                 | -                  |
| Elongation with BYTUM REINFORCEMENT             | EN 12311-1 | 80 %                  | -                  |
| Temperature resistance                          | -          | -30 / 80 °C           | -22 / 176 °F       |
| Reaction to fire                                | EN 13501-1 | class E               |                    |
| Thermal conductivity (λ)                        | -          | 0,2 W/(m·K)           | 0.12 BTU/h·ft·°F   |
| Specific heat                                   | -          | 1500 J/(kg·K)         | -                  |
| Flexibility at low temperatures                 | EN 1109    | -10 °C                | 14 °F              |
| Application temperature                         | -          | 5 / 35 °C             | 41 / 95 °F         |
| Material yield per 1 mm thickness               | -          | 1,5 kg/m <sup>2</sup> | -                  |
| Crack bridging                                  | EN 1602-7  | > 2,5 mm              | > 98 mil           |
| Crack bridging with BYTUM REINFORCEMENT         | EN 1602-7  | > 10 mm               | > 393 mil          |
| Waiting time for:                               |            |                       |                    |
| - complete hardening                            | -          | 4 days                | -                  |
| - application of each layer on the previous one | -          | 24 hours              | -                  |
| - covering with ceramics or paint               | -          | 4 days                | -                  |
| Static punching method A / method B             | EN 12730   | 45 / 25 kg            | -                  |
| Dynamic punching method A / method B            | EN 12691   | 1000 / 1000 mm        | -                  |
| Class and type                                  | EN 14891   | C PI-MC-IR / DM OP    | -                  |
| Adhesives range for application of ceramic      | EN 1015-6  | C2 - S1 / S2          | -                  |

Waste classification (2014/955/EU): 08 04 16.

#### CODES AND DIMENSIONS

#### BYTUM LIQUID

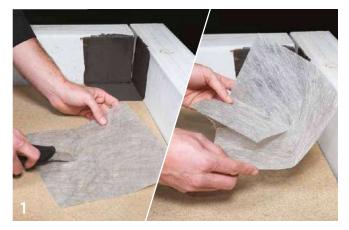
| CODE | content | content |    |
|------|---------|---------|----|
|      | [kg]    | [lb]    |    |
| BYTL | 10      | 22      | 50 |

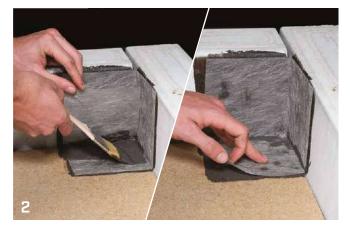
#### BYTUM REINFORCEMENT

| CODE | Н   | L   | А                 | Н    | L    | Α                  |    |
|------|-----|-----|-------------------|------|------|--------------------|----|
|      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| BYTR | 1   | 50  | 50                | 3    | 164  | 538                | 24 |

#### ■ RECOMMENDATIONS FOR INSTALLATION

WATERPROOFING OF WALL-TO-CEILING CORNERS



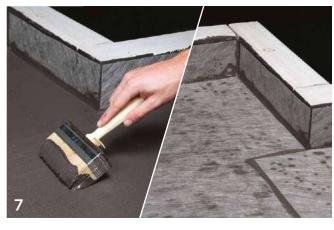


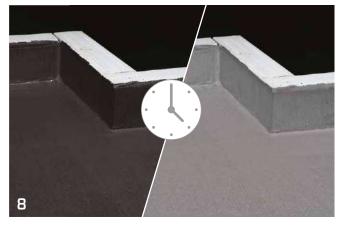












- 1 MARLIN, CUTTER
- 3 BRUSH

### I FLUID MEMBRANE



# SYNTHETIC SEALING MEMBRANE FOR BRUSH AND SPRAY APPLICATION

#### **FLEXIBLE**

The synthetic resin mix is elastic and resistant to any movement of the sealed cracks.

#### **FAST INSTALLATION**

It can be applied using a roller, brush or spray with the possibility of inserting a synthetic reinforcing fabric. Removable with hot water.



#### ■ TECHNICAL DATA

| Properties                                       | standard        | value                         | USC conversion |
|--|-----------------|-------------------------------|----------------|
| Colour   | -               | grey                          | -              |
| Classification                                   | EN 1504-2       | PI-MC-IR <sup>(1)</sup>       | -              |
| Classification                                   | EN 14891        | DM 01 <sup>(2)</sup>          | -              |
| Density at 20 °C                                 | ISO 2811-1      | 1.45 kg/L                     | 232,52 oz/gal  |
| Surface cross-linking time 23 °C / 50% RH        | -               | 4 h                           | -              |
| Time required for complete drying 23 °C / 50% RH | -               | 24 h                          | -              |
| Dry residue by mass                              | ISO 3251        | 65%                           | -              |
| Dynamic viscosity                                | EN ISO 3219     | 48-72 Pa·s                    | -              |
| Adhesion on concrete by direct traction          | EN 1542         | > 1 N/mm <sup>2</sup>         | 145 lbf/in²    |
| Watertightness                                   | EN 14891        | conforming                    | -              |
| Liquid water permeability (W)                    | EN 1062-3       | $< 0.1  kg/m^2 \cdot h^{0.5}$ | -              |
| Water vapour transmission (Sd)                   | ISO 7783        | < 5 m                         | > 0.7 US perm  |
| Carbon dioxide permeability (C)                  | EN 1062-6       | > 50 m                        | -              |
| Application temperature                          | -               | +5 / +35 °C                   | +41 / +95 °F   |
| Storage temperature <sup>(3)</sup>               | -               | ≥ +5 °C                       | ≥ +41 °F       |
| VOC content                                      | Dir. 2004/42/EC | 0 g/L                         | -              |

<sup>(1)</sup> Principles. protection against penetration risks (H,I,C); moisture control (H,C); increasing resistivity by limiting moisture content (H,C). Types. H: Hydrophobic impregnation; I: Impregnation; C: Coating.

| CODE     | content | content |   |
|----------|---------|---------|---|
|          | [kg]    | [lb]    |   |
| FLUIDMEM | 10      | 22      | 1 |

<sup>(2)</sup> Water based waterproofing product for liquid application in dispersion with improved crack bridging capability at -5 °C

<sup>(3)</sup>Store the product in a dry, covered location for no more than 24 months. Check the expiry date on the packaging. It is affected by frost. Waste classification (2014/955/EU): 08 04 16.







| Airless pump specifications             |        |           |         |  |  |  |
|---|--------|-----------|---------|--|--|--|
| Capacity                                | ≥      | 3,6 L/min |         |  |  |  |
| Nozzle                                  | $\geq$ | 0,5 mm    | 0.02 in |  |  |  |
| Tube length Φ 6,5 mm ( <i>0.25 in</i> ) | $\leq$ | 30 m      | 16 ft   |  |  |  |
| Maximum pump pressure                   | ≥      | 230 bar   |         |  |  |  |





#### **SAFETY**

Resistant to water stagnation on the surface, even when there is no slope. Also suitable for surfaces in industrial areas or in sea areas. Odourless and non-toxic product. Solvent-free.

#### **ADHERENCE**

Thanks to its formulation, the product offers perfect adhesion, is suitable for complex construction details and resists micro-cracks.

### I CONSTRUCTION SEALING

# COMPRESSIBLE SEALING GASKET FOR REGULAR JOINTS

#### PRACTICAL

It can be applied during construction or during prefabrication for sealing timber-to-timber joints.

#### **STABLE**

Thanks to the solid EPDM mix, it endures over time. It is not affected by chemical attacks.

#### COMPOSITION

Extruded compact EPDM



#### ■ TECHNICAL DATA

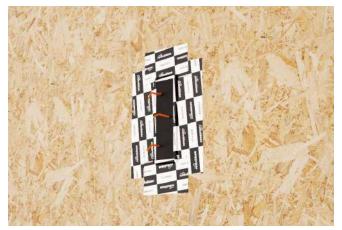
| Properties                         | standard   | value                  | USC conversion          |
|------------------------------------|------------|------------------------|-------------------------|
| Density                            | -          | 0,48 g/cm <sup>3</sup> | 0.28 oz/in <sup>3</sup> |
| Compression deformation 22h +23 °C | EN ISO 815 | < 25%                  | -                       |
| Compression deformation 22h +40 °C | EN ISO 815 | < 35%                  | -                       |
| Temperature resistance             | -          | -35 / +100 °C          | -31 / +212 °F           |
| Storage temperature <sup>(1)</sup> | -          | +5 / +25 °C            | +41 / +77 °F            |
| Solvents                           | -          | no                     | -                       |

<sup>&</sup>lt;sup>(1)</sup>Store the product in a dry, covered location. Waste classification (2014/955/EU): 17 02 03.

| CODE        | В    | s    | L   | В    | S     | L    |   |
|-------------|------|------|-----|------|-------|------|---|
|             | [mm] | [mm] | [m] | [in] | [mil] | [ft] |   |
| CONSTRU4625 | 46   | 3    | 25  | 1.8  | 118   | 82   | 3 |







#### ■ RELATED PRODUCTS



DOUBLE BAND page 62



MS SEAL page 120



HAMMER STAPLER 47 page 330



#### TESTED RESISTANCE

In Rothoblaas' experimental fire protection project it was tested for an El value.

#### NOISE REDUCTION

The acoustic performance has been tested in the Flanksound Project by Rothoblaas: using it as a wall gasket provides up to 3 dB of noise reduction.

### I TIE-BEAM STRIPE

#### TIE BEAM SEALING PROFILE

#### **ADJUSTABLE**

Flexible profile is easy to work, thanks to the soft and shapeable mixture.

#### WATERPROOFING

Resilient profile to connect tie beam and brickwork/concrete.



#### ■ TECHNICAL DATA

| Properties                           | standard   | value                 | USC conversion          |
|--------------------------------------|------------|-----------------------|-------------------------|
| SHORE A hardness                     | EN ISO 868 | 50                    | -                       |
| Density                              | ASTM D 297 | 1,1 g/cm <sup>3</sup> | 0.64 oz/in <sup>3</sup> |
| Compression deformation 22h + 100 °C | EN ISO 815 | < 50%                 | -                       |
| Breaking load                        | EN ISO 37  | ≥ 9 MPa               | -                       |
| Elongation at failure                | EN ISO 37  | ≥ 500 %               | -                       |
| Application temperature              | -          | -40 / +90 °C          | -40 / +194 °F           |
| Temperature resistance               | -          | -40 / +100 °C         | -40 / +212 °F           |
| Storage temperature <sup>(1)</sup>   | -          | +5 / +25 °C           | +41 / +77 °F            |
| Solvents                             | -          | no                    | -                       |

<sup>&</sup>lt;sup>(1)</sup>Store the product in a dry, covered location. Waste classification (2014/955/EU): 17 02 03.

#### CODES AND DIMENSIONS

| CODE      | В    | s    | L   | В    | S     | L    |   |
|-----------|------|------|-----|------|-------|------|---|
|           | [mm] | [mm] | [m] | [in] | [mil] | [ft] |   |
| TIEBEAM71 | 71   | 9    | 50  | 2.8  | 354   | 164  | 1 |



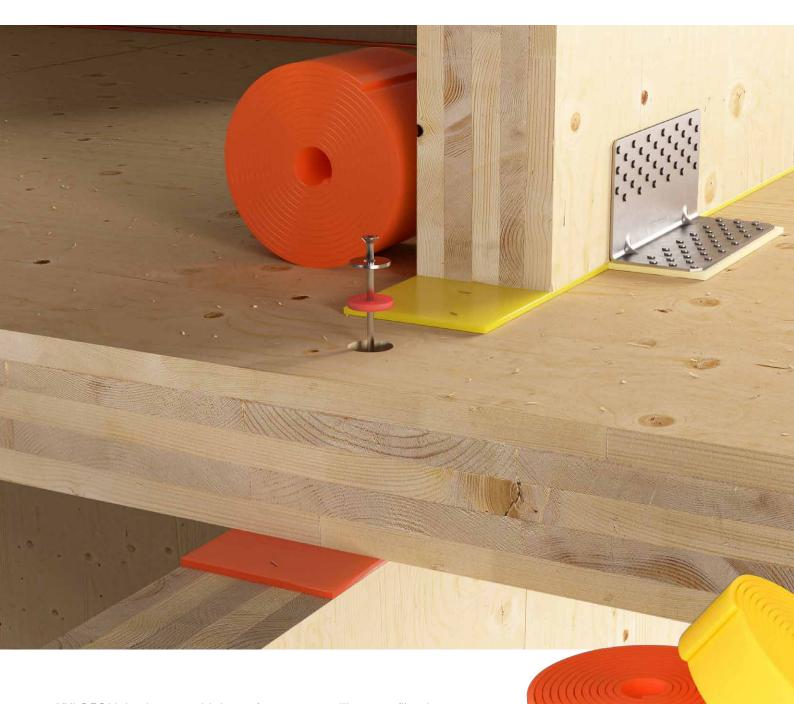
#### **SMART**

The pre-formed profile adapts well to surfaces, ensuring air and water tightness at all times. It can also be used vertically as a seal between walls.

#### **STRENGTH**

Its profile ensures great elasticity and resistance even in the event of perforations and mechanical fastening thanks to the special modified EPDM compound.

# MORE ACOUSTIC COMFORT IN YOUR TIMBER HOUSE



XYLOFON is the very high performance resilient profile that ensures acoustic comfort in timber structures and houses. Made of a polyure-thane compound, it is available in 5 versions from 35 to 90 shore, on the basis of the load it has to support. Tested and certified for use as a desolidarisation and mechanical interruption layer between building materials, it reduces the transmission of airborne and structural noise (up to more than 15 dB). Rely on the best performing acoustic profile on the market.

Scan the QR code and discover the technical features of XYLOFON







### **TAPES**

#### HOW IS THE TAPE MADE?

RELEASE LINER: removable anti-adhesive layer that makes it possible to unwind the tape ADHESIVE: solvent-free adhesive mass REINFORCING LAYER: polymeric grid that provides strength and stiffness to the final product ADHESIVE: solvent-free adhesive mass PRIMER: layer that serves as a binder between the support and the adhesive **SUPPORT:** film to which the adhesive mix and the other components are applied

FINGERLIFT: part of the liner that sticks out in order to simplify its removal

INTERNAL CORE: cardboard or plastic cylinder around which the tape is wound

#### CHOOSE A SEALING PRODUCT OR TAPE



Examine the nature of the surfaces and their shape. Very irregular surfaces require more glue in order to activate the adhesion process.



Water, sudden temperature changes and exposure to UV rays may shorten the service life of the products. The best-performing products can remain functional even with a damp support surface.



It is necessary to analyse the mechanical stress to which the product will be subjected once it is working. During the application phase, it is important to reduce tension and elongation down to a minimum.



Prior to application, check to see whether any technical requirements must be complied with.



It is mandatory to comply with the final date, if indicated, within which the product has to be applied.

Keep the tapes in their original packing to avoid any direct exposure to sunlight and prevent any contact with dust and dirt. For storage, it is generally a good idea to ensure certain conditions are met: temperature between 5 and 25 °C, relative humidity below 65% and avoid extreme weather conditions and direct exposure to heat sources.

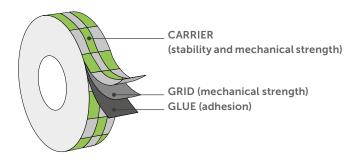
| WHAT TYPE OF OUTE                                      |   | DESCRIPTION AND SITURGE APPLICATION   |
|--|---|---|
| WHAT TYPE OF GLUE?                                     |   | PROPERTIES AND FIELD OF APPLICATION   |
| ACRYLIC MIX IN AQUEOUS DISPERSION<br>OR UV-CROSSLINKED | > | <ul><li>Suitable for smooth surfaces</li><li>Thermally stable</li><li>UV stable</li><li>Elastic</li></ul>   |
| BUTYL: HIGH PERFORMANCE SYNTHETIC POLYMER              | > | <ul> <li>Suitable for very irregular and porous surfaces</li> <li>Deformable</li> <li>UV stable over time</li> <li>Thermally stable</li> <li>Effective at low temperatures</li> </ul>                 |
| BITUMEN: SOLVENT-FREE OIL REFINING<br>RESIDUE          | > | <ul><li>Suitable for irregular surfaces</li><li>Deformable</li></ul>  |
| WHAT IS THE MOST APPROPRIATE MATERIAL?                 |   | PROPERTIES AND FIELD OF APPLICATION   |
| NON-WOVEN PP FABRIC                                    | > | <ul><li>Can be plastered</li><li>Thermally stable</li><li>Flexible</li></ul>  |
| POLYETHYLENE FILM                                      | > | <ul><li>Waterproof</li><li>Flexible</li></ul>   |
| EXPANDED POLYURETHANE FOAM                             | > | <ul> <li>Suitable to fill in cracks<br/>on irregular surfaces</li> <li>Rapid expansion (linked to<br/>weather conditions)</li> <li>Elastic over time</li> <li>Waterproof</li> </ul>                   |
| CLOSED CELL POLYETHYLENE FOAM                          | > | <ul><li>Thermally stable</li><li>Chemically stable</li><li>Waterproof</li></ul>   |
| IMPREGNATED PAPER                                      | > | <ul><li>Workable</li><li>Thermally stable</li></ul>   |
| EPDM   | > | <ul> <li>High thermal stability</li> <li>High chemical stability</li> <li>Elasticity remains stable over time</li> <li>High mechanical strength and resistance to wear</li> <li>Waterproof</li> </ul> |
| ALUMINIUM  | > | <ul><li>UV-stable</li><li>Thermally stable</li><li>Highly protective for the glue</li><li>Waterproof</li><li>Deformable</li></ul>   |

#### TAPE ADHESION

The function of the tape is to mechanically join two non-adhesive products together and to seal discontinuities on the surface (cracks, holes, etc.).

Special acrylic polymers are used in the production of construction tape glue to create pressure sensitive adhesives (PSA): adhesives that are able, when pressure is applied, to exploit the roughness of the surface to ensure adhesion.

The adhesion of a tape is influenced by the material of the surface to which it adheres, with which it establishes a chemical-physical interaction, by the roughness and viscosity of the material itself.

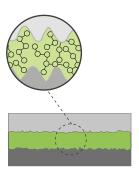


#### ■ FACTORS INFLUENCING ADHERENCE

#### MATERIAL OF THE SUPPORT

The special chemical composition of the adhesive allows it to establish secondary interactions with the surface, based on a mechanism similar to that which allows a gecko to walk on window glass. This property significantly increases the adhesion of the tape.

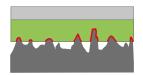
#### SUPPORT ROUGHNESS



The adhesive is able to exploit the roughness of the surface by penetrating into the microporosity to create adhesion.

#### GLUE VISCOSITY

Another decisive aspect for adhesion is the glue viscosity. A very viscous glue will be less adhesive because it penetrates less into the microporosity of the surface. On the contrary, a less viscous glue will be more adhesive because it makes better use of surface roughness to increase the contact area. If the ambient temperature changes, the viscosity and adhesion of the glue will change.

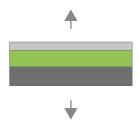


Example of a very viscous glue. The red lines represent the contact area. Small contact surface.

Example of a low viscosity glue. The red line represents the contact area. Large contact surface.

#### GLUE

#### **ADHESION**

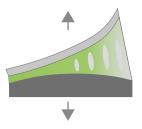


This is the force exerted between the glue and the surface to which the tape is glued. The adhesion required depends on the application. It is influenced by the support material and roughness.



Honey is an example of a very adhesive and not very cohesive material.

#### COHESION



This is the force acting within the glue, depending on the intensity of the interaction between the glue molecules. It must be high enough to reduce creep.



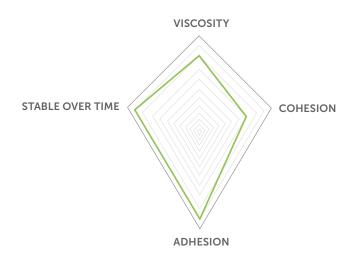


#### **GLUE PROPERTIES**

The adhesive properties of a tape are largely influenced by the glue. A good glue is characterised by:

- ability to quickly penetrate surface microporosities;
- balance of adhesion and cohesion forces;
- ability to maintain properties over time.

A mixture of materials is used to obtain this. Depending on which force prevails, an adhesive or cohesive fracture can be observed.



#### ADHESIVE FRACTURE

#### COHESIVE FRACTURE

In the case of building tapes, a cohesive fracture in the supports (membranes) is preferable as this exploits the maximum strength of the joint.



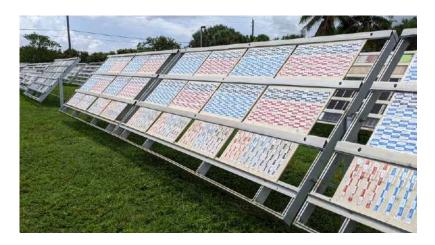
There is a separation between the two surfaces: glue cohesion > applied force > adhesion



Membrane fracture: adhesive strength and glue cohesion > applied force

### TAPES AND DURABILITY

#### WEATHERING RESISTANCE TEST IN FLORIDA



Florida is the only true subtropical region in the United States and is an internationally recognised site for outdoor weather exposure due to the synergistic effect of:

- presence of strong solar radiation
- prolonged exposure to UV radiation
- high temperatures throughout the year
- heavy rainfall
- · high humidity



#### $\mathbf{1}$ year of exposure in Florida $> \mathbf{1}$ year in the rest of the world

At regular intervals we carry out two tests, according to regulations, to check how much the exposure has changed the mechanical properties of the tapes:



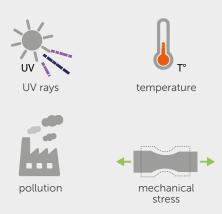
EN ISO 29864

EN ISO 29862

#### HOW DOES TAPE DEGRADATION OCCUR?

Every material has its own sources of degradation.

**UV** rays, high temperatures, pollution and mechanical stresses affect the durability of the tapes by acting on polymers that compose them.

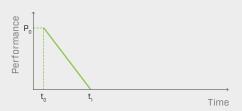


Each source of degradation listed above has a negative effect on the performance of the material. However, it is the sum of several degradation factors that represents the critical situation of the products durability.

#### 1 SOURCE OF DEGRADATION



### SUM OF SEVERAL SOURCES OF DEGRADATION



In the presence of multiple sources of degradation, performance decline occurs faster and more sharply.

### **ALU BAND**

# REFLECTIVE SINGLE-SIDED ADHESIVE TAPE FOR INDOOR USE

#### **HEAT-RESISTANT UP TO 130°C**

The combination of glue and aluminium carrier makes it possible to achieve very high thermal stability without compromising the glue adhesion and viscosity.

#### **VERSATILE**

Applicable on thermo-hydraulic structures, thanks to the high thermal reflectance and the glue that guarantees excellent adhesion.



#### ■ TECHNICAL DATA

| Properties                         | standard     | value         | USC conversion        |
|------------------------------------|--------------|---------------|-----------------------|
| Total thickness                    | DIN EN 1942  | 0,06 mm       | 2.4 mil               |
| Tear strength                      | DIN EN 14410 | > 25 N/cm     | > 14.28 lbf/in        |
| Expansion capacity                 | DIN EN 14410 | > 5%          | -                     |
| Adhesiveness                       | DIN EN 1939  | > 8 N/cm      | > 4.57 lbf/in         |
| Water vapour transmission (Sd)     | EN 1931      | approx. 100 m | approx. 0.035 US perm |
| Watertightness                     | -            | conforming    | -                     |
| Reaction to fire                   | DIN 4102-1   | class B1      | -                     |
| Reaction to file                   | EN 13501     | class E       | -                     |
| Temperature resistance             | -            | -40 / +130 °C | -40 / +266 °F         |
| Application temperature            | -            | > -10 °C      | > +14 °F              |
| Storage temperature <sup>(1)</sup> | -            | +15 / +30 °C  | +59 / +86 °F          |
| Solvents                           | -            | no            | -                     |

 $<sup>\</sup>ensuremath{^{(1)}}$  Store the product in a cool, dry place for no more than 12 months. Waste classification (2014/955/EU): 17 09 04.

#### CODES AND DIMENSIONS

| CODE      | В    | L   | В    | L    |    |
|-----------|------|-----|------|------|----|
|           | [mm] | [m] | [in] | [ft] |    |
| ALUBAND50 | 50   | 50  | 2.0  | 164  | 24 |
| ALUBAND75 | 75   | 50  | 3.0  | 164  | 24 |



#### **VAPOUR BARRIER**

The aluminium carrier offers very high vapour protection and watertightness and is therefore ideal in combination with the BARRIER ALU line and in plant engineering applications.

### **I DOUBLE BAND**

#### UNIVERSAL DOUBLE-SIDED TAPE

#### **EXCELLENT ADHESION**

The solvent-free acrylic glue mix ensures excellent adhesion on most common supports, even at low temperatures.

#### **SECURE**

In spite of the low thickness, the sealing will be secure thanks to the reinforcing grid.

#### COMPOSITION

release liner

silicone coated paper

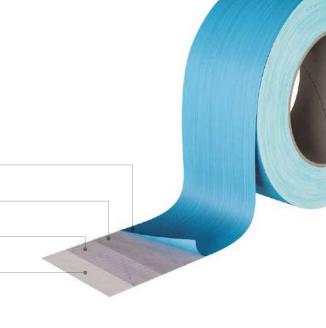
acrylic dispersion without solvents

reinforcing layer

polyester reinforcing grid

glue

acrylic dispersion without solvents



#### ■ TECHNICAL DATA

| Properties                         | standard    | value  | USC conversion                        |
|------------------------------------|-------------|--|---------------------------------------|
| Total thickness                    | DIN EN 1942 | 0,25 mm  | 10 mil                                |
| Adhesiveness                       | DIN EN 1939 | ≥ 25 N/25 mm   | ≥ 5.71 lbf/in                         |
| Temperature resistance             | -           | -30 / +100 °C  | -22 / +212 °F                         |
| Application temperature            | -           | $-10 / +40 ^{\circ}\text{C}$ recommended > +5 $^{\circ}\text{C}$ | +14 / +104 °F<br>recommended > +41 °F |
| Watertightness                     | -           | conforming   | -                                     |
| Storage temperature <sup>(1)</sup> | -           | +5 / +25 °C  | +41 / +77 °F                          |
| Solvents                           | -           | no   | -                                     |

 $<sup>\</sup>ensuremath{^{(1)}}\mbox{Store}$  the product in a dry, covered location. Waste classification (2014/955/EU): 08 04 10.

| CODE     | В    | L   | В    | L    |   |
|----------|------|-----|------|------|---|
|          | [mm] | [m] | [in] | [ft] |   |
| DOUBLE40 | 40   | 50  | 1.6  | 164  | 8 |









#### ■ RELATED PRODUCTS



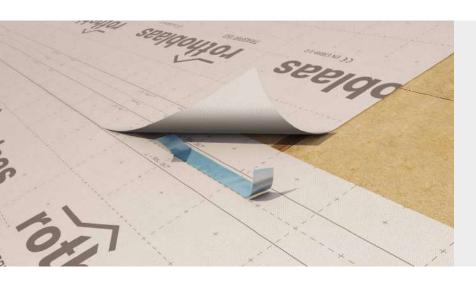
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ROLLER page 326



MARLIN page 328



#### PERFECT INVISIBLE SEALING

DOUBLE BAND provides a perfect concealed seal and offers weather protection and durability.

#### TEMPERATURE RESISTANCE

Thanks to its special formulation, the acrylic glue ensures excellent stability against temperature ranges.

# | SEAL BAND | SEAL SQUARE









#### SINGLE-SIDED TAPE FOR INDOOR USE

#### **EFFECTIVE**

The pre-shapeable carrier allows efficient sealing of concave or convex corners and edges.

#### **SQUARE VERSION**

Ideal for small point seals or holes for the blowing technique, where precision is required.

#### COMPOSITION

support

paper reinforced with protective film

acrylic dispersion without solvents

release liner

silicone coated paper



#### ■ TECHNICAL DATA

| Properties                         | standard           | value             | USC conversion |
|------------------------------------|--------------------|-------------------|----------------|
| Total thickness                    | EN 1942            | 0,33 mm           | 13 mil         |
| Adhesiveness                       | EN 1939            | 35 N/25 mm        | 8 lbf/in       |
| Water vapour transmission (Sd)     | EN ISO 12572       | 6 m               | 0.58 US perm   |
| Temperature resistance             | -                  | -40 / +100 °C     | -40 / +212 °F  |
| Application temperature            | -                  | -10 / +40 °C      | +14 / +104 °F  |
| Storage temperature <sup>(1)</sup> | -                  | +15 / +25 °C      | +59 / +77 °F   |
| VOC emissions                      | EN 16516           | $< 5 \mu g/m^{3}$ |                |
| French VOC classification          | ISO 16000          | A+                | -              |
| Emicode                            | GEV test procedure | EC1 plus          | -              |

 $<sup>\</sup>ensuremath{^{(1)}}\mbox{Store}$  the product in a dry, covered location.

#### CODES AND DIMENSIONS

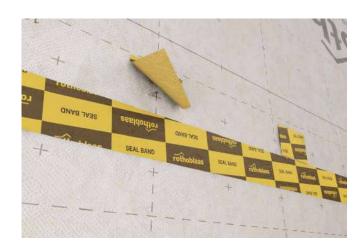
#### SEAL BAND

| CODE     | liner   | В    | L   | liner     | В    | L    |    |
|----------|---------|------|-----|-----------|------|------|----|
|          | [mm]    | [mm] | [m] | [in]      | [in] | [ft] |    |
| SEAL60   | 60      | 60   | 25  | 2.4       | 2.4  | 82   | 10 |
| SEAL1248 | 12 / 48 | 60   | 25  | 0.5 / 1.9 | 2.4  | 82   | 10 |
| SEAL3030 | 30 / 30 | 60   | 25  | 1.2 / 1.2 | 2.4  | 82   | 10 |

#### SEAL SQUARE

| CODE    | В    | Н    | L   | В    | Н    | L    | pcs/roll |   |
|---------|------|------|-----|------|------|------|----------|---|
|         | [mm] | [mm] | [m] | [in] | [in] | [ft] |          |   |
| SEAL180 | 180  | 180  | 36  | 7.1  | 7.1  | 118  | 200      | 1 |

Waste classification (2014/955/EU): 08 04 10.









#### ■ PRODUCT RANGE







SEAL1248



SEAL3030



SEAL180



#### **FAST INSTALLATION**

Versions with pre-cut liner are available for quick and easy installation.

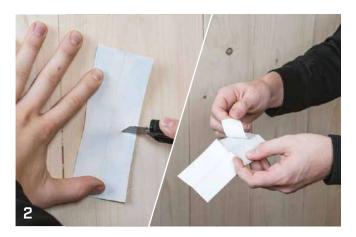
#### **SECURE**

Reinforced paper support, ideal for indoor use; airtightness guaranteed over time.

#### ■ RECOMMENDATIONS FOR INSTALLATION

CORNER DETAIL

















- 2 MARLIN, CUTTER
- ROLLER

#### BEAM SEAL DETAIL









- 1 MARLIN, CUTTER
- 3 ROLLER

#### WINDOW HOLE SEALING DETAIL







- 1 MARLIN, CUTTER
- 4 ROLLER

### **EASY BAND**





D DIN 4108-11

#### UNIVERSAL SINGLE-SIDED TAPE

#### **VERSATILE**

Progress adhesion, stable over time, for the most common supports.

#### **INDUSTRIAL USE**

Adhesive mix and available versions also designed for prefabrication.

#### COMPOSITION

support PE film

glue

acrylic dispersion without solvents

reinforcing layer

polyester reinforcing grid

acrylic dispersion without solvents

release liner

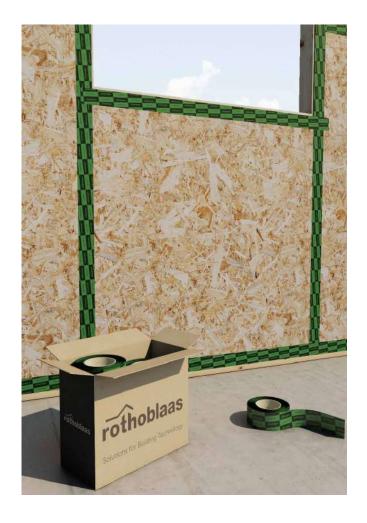
silicone coated paper

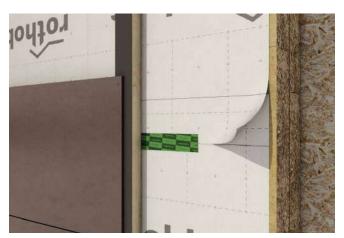
#### ■ TECHNICAL DATA

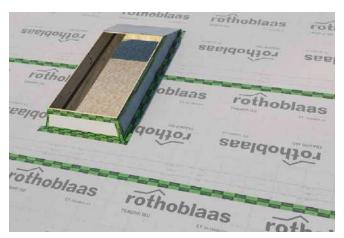
| Properties                         | standard           | value                | USC conversion |
|------------------------------------|--------------------|----------------------|----------------|
| Total thickness                    | -                  | 0,28 mm              | 11 mil         |
| Adhesiveness                       | EN 1939            | > 35 N/25 mm         | 8 lbf/in       |
| Water vapour transmission (Sd)     | EN ISO 12572       | 40 m                 | 0.09 US perm   |
| UV resistance                      | -                  | 4 months             | -              |
| Application temperature            | -                  | -10 / +100 °C        | +14 / +212 °F  |
| Temperature resistance             | -                  | -40 / +100 °C        | -40 / +212 °F  |
| Storage temperature <sup>(1)</sup> | -                  | +15 / +25 °C         | +59 / +77 °F   |
| Solvents                           | -                  | no                   | -              |
| VOC emissions                      | EN 16516           | 55 μg/m <sup>3</sup> |                |
| French VOC classification          | ISO 16000          | A+                   | -              |
| Emicode                            | GEV test procedure | EC1 plus             | -              |

<sup>(1)</sup>Store the product in a dry, covered location. Waste classification (2014/955/EU): 08 04 10.

| CODE   | В    | L   | В    | L    |    |
|--------|------|-----|------|------|----|
|        | [mm] | [m] | [in] | [ft] |    |
| EASY50 | 50   | 25  | 2.0  | 82   | 12 |
| EASY60 | 60   | 25  | 2.4  | 82   | 10 |







#### **RELATED PRODUCTS**

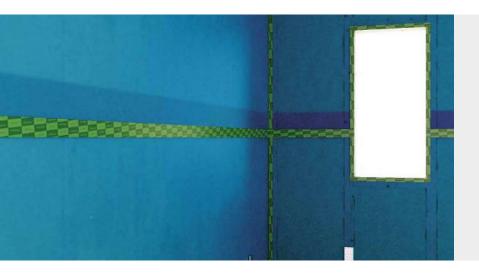




**PRIMER** page 103



CUTTER page 328



#### PERFORMANCE COST

The packaging and the mix of glue and carrier made it possible to obtain a very good product at a low cost.

#### ALSO FOR WARM CLIMATES

The type of glue, its quantity and the choice of carrier make this tape suitable for sealing on smooth surfaces and at high temperatures, preventing the tape from slipping in all those situations where the glue generally tends to soften.

### **I SPEEDY BAND**





# UNIVERSAL SINGLE-SIDED TAPE WITHOUT RELEASE LINER

#### **FAST INSTALLATION**

Can be used both externally and internally, guarantees fast and secure sealing on the most common supports.

#### **SUSTAINABLE**

The lack of a release film means less waste to dispose of.

#### COMPOSITION

**support** PE film

glue

solvent-free UV-crosslinked acrylic

reinforcing layer

polyester reinforcing grid

glue

solvent-free UV-crosslinked acrylic

#### ■ TECHNICAL DATA

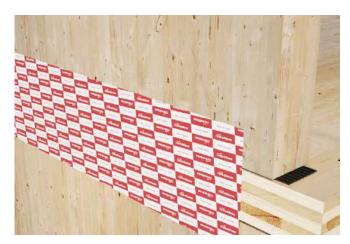
| Properties                         | standard   | value          | USC conversion |
|------------------------------------|------------|----------------|----------------|
| Total thickness                    | AFERA 5006 | 0,245 mm       | 10 mil         |
| Adhesiveness on steel              | AFERA 5001 | ≥ 25 N/25 mm   | ≥ 5.71 lbf/in  |
| Adhesiveness on polyethylene       | EN 12316-2 | ≥ 12,5 N/25 mm | ≥ 2.86 lbf/in  |
| Tear strength                      | EN 12317-2 | ≥ 90 N/50 mm   | ≥ 10.28 lbf/in |
| Water vapour transmission (Sd)     | EN 1931    | 40 m           | 0.09 US perm   |
| UV resistance                      | -          | 6 months       | -              |
| Watertightness                     | -          | conforming     | -              |
| Application temperature            | -          | -10 / +30 °C   | +14 / +86 °F   |
| Temperature resistance             | -          | -40 / +80 °C   | -40 / +176 °F  |
| Storage temperature <sup>(1)</sup> | -          | +5 / +30 °C    | +41 / +86 °F   |
| Solvents                           | -          | no             | -              |
| French VOC classification          | ISO 16000  | A+             | -              |

<sup>&</sup>lt;sup>(1)</sup>Store the product in a dry, covered location. Waste classification (2014/955/EU): 08 04 10.

| CODE      | В    | L   | В    | L    |    |
|-----------|------|-----|------|------|----|
|           | [mm] | [m] | [in] | [ft] |    |
| SPEEDY60  | 60   | 25  | 2.4  | 82   | 10 |
| SPEEDY300 | 300  | 25  | 11.8 | 82   | 2  |









#### ■ RELATED PRODUCTS



#### RANGE



SPEEDY60



SPEEDY300



#### **EASY TEAR**

It can be easily torn off thanks to the serrated edges that facilitate directional breaking of the tape without the use of scissors or cutters.

#### **UNIVERSAL**

Speed and good adhesion strength on most common building materials.

### | FLEXI BAND











# UNIVERSAL SINGLE-SIDED HIGH-ADHESIVE TAPE

#### UNIVERSAL

Excellent initial tack and superior adhesion strength on any surface.

#### HIGH PERFORMANCE

Guaranteed adhesion over time, even on dusty, porous or damp surfaces.

#### COMPOSITION

**support** PE film

alue

acrylic dispersion without solvents

reinforcing layer

reinforcing polyester grid

glue

acrylic dispersion without solvents

release liner

silicone coated paper

#### ■ TECHNICAL DATA

| Properties                         | standard           | value   | USC conversion |
|------------------------------------|--------------------|---|----------------|
| Total thickness                    | DIN EN 1942        | 0,34 mm                                       | 13 mil         |
| Tear strength                      | DIN EN 14410       | ≥ 50 N/25 mm                                  | ≥ 11.42 lbf/in |
| Expansion capacity                 | DIN EN 14410       | 20%   | -              |
| Adhesiveness                       | DIN EN 1939        | ≥ 30 N/25 mm                                  | ≥ 6.85 lbf/in  |
|                                    | EN 1931            | approx. 45 m                                  | -              |
| Water vapour transmission (Sd)     | ASTM E96 (dry cup) | 6,27 ng/(m <sup>2</sup> ·24h)<br>0.11 US perm | -              |
| UV resistance                      |                    | 6 months                                      | -              |
| Application temperature            |                    | -10 / +40 °C                                  | +14 / +104 °F  |
| Temperature resistance             |                    | -40 / +80 °C                                  | -40 / +176 °F  |
| Storage temperature <sup>(1)</sup> |                    | +5 / +25 °C                                   | +41 / +77 °F   |
| VOC content                        |                    | 23 μg/m <sup>3</sup>                          | -              |
| Emicode                            | GEV test procedure | EC1 plus                                      | -              |

<sup>&</sup>lt;sup>(1)</sup>Store the product in a dry, covered location. Waste classification (2014/955/EU): 08 04 10.

| CODE      | liner   | В    | L   | liner     | В    | L    |    |
|-----------|---------|------|-----|-----------|------|------|----|
|           | [mm]    | [mm] | [m] | [in]      | [in] | [ft] |    |
| FLEXI60   | 60      | 60   | 25  | 2.4       | 2.4  | 82   | 10 |
| FLEXI100  | 100     | 100  | 25  | 3.9       | 3.9  | 82   | 6  |
| FLEXI5050 | 50 / 50 | 100  | 25  | 2.0 / 2.0 | 3.9  | 82   | 6  |
| FLEXI7575 | 75 / 75 | 150  | 25  | 3.0 / 3.0 | 5.9  | 82   | 4  |







# ■ PRODUCT RANGE







FLEXI100



FLEXI5050



FLEXI7575 fingerlift



# **VERY LOW EMISSIONS**

Thanks to the special formulation of the acrylic glue, the tape achieves the highest level of safety against harmful emissions.

# ALSO AT LOW TEMPERATURES

The combination of carrier and acrylic dispersion glue is designed for good adhesion even in extremely cold temperatures.

# I FLEXI BAND UV

# UNIVERSAL SINGLE-SIDED ADHESIVE TAPE WITH HIGH UV STABILITY AND HEAT RESISTANCE

#### **UV STABILITY AND AGEING**

The special carrier is designed to offer excellent UV stability, while maintaining mechanical and adhesion properties over time due to excellent ageing resistance.

# HEAT-RESISTANT UP TO 120°C

The combination of glue and polypropylene carrier makes it possible to achieve very high thermal stability without compromising the glue adhesion and viscosity.

#### COMPOSITION

support PP film

glue

acrylic dispersion without solvents

reinforcing layer

reinforcing polyester grid

glue

acrylic dispersion without solvents

release liner

silicone coated paper

# ■ TECHNICAL DATA

| Properties                             | standard   | value                 | USC conversion |
|--|------------|-----------------------|----------------|
| Total thickness                        | -          | 0,33 mm               | 13 mil         |
| Tear strength                          | EN ISO 527 | 70 N/10mm             | 40 lbf/in      |
| Expansion capacity                     | EN ISO 527 | 500%                  | -              |
| Adhesiveness                           | EN 1939    | > 35 N/25 mm          | > 8 lbf/in     |
| Water vapour transmission (Sd)         | EN 1931    | 20 m                  | 0.17 US perm   |
| Water vapour resistance factor $(\mu)$ | EN 1931    | 28500                 | 47.03 MN·s/g   |
| UV resistance                          | -          | 12 months             | -              |
| Application temperature                | -          | > -10 °C              | > +14 °F       |
| Temperature resistance                 | -          | -40 / +120 °C         | -40 / +248 °F  |
| Storage temperature <sup>(1)</sup>     | -          | +5 / +25 °C           | +41 / +77 °F   |
| Solvents                               | -          | no                    | -              |
| VOC emissions                          | ISO 16000  | 130 μg/m <sup>3</sup> | -              |

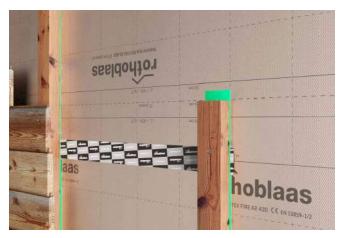
<sup>&</sup>lt;sup>(1)</sup>Store the product in a dry, covered location. Waste classification (2014/955/EU): 08 04 10.

# CODES AND DIMENSIONS

| CODE      | В    | L   | В    | L    |    |
|-----------|------|-----|------|------|----|
|           | [mm] | [m] | [in] | [ft] |    |
| FLEXIUV60 | 60   | 25  | 2.4  | 82   | 10 |







# ■ RELATED PRODUCTS

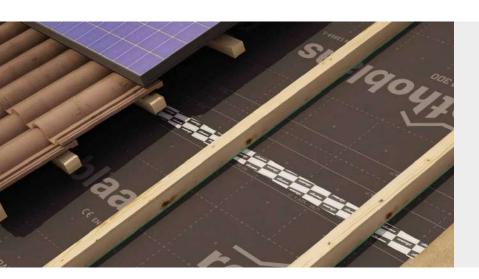




ROLLER page 326



CUTTER page 328



# **FLEXIBILITY**

The carrier is made of a special copolymer mix that ensures high elasticity and deformation capacity for the most difficult details without reducing mechanical strength.

# SPECIAL GLUE

The solvent-free acrylic glue mix ensures excellent adhesion on most common supports. In addition, it is extremely stable at high temperatures so that it does not extend at the tape edges and create problems during transport and installation.

# I FACADE BAND UV

# UNIVERSAL SINGLE-SIDED TAPE, RESISTANT TO UV RAYS

#### **UV STABILITY**

Ideal for façade sealing and for overlapping on UV-ray resistant membranes.

# INVISIBLE

Developed for application on TRASPIR for façade and TRASPIR EVO 300 for excellent aesthetic performance.

#### COMPOSITION

support PP film

acrylic dispersion without solvents

reinforcing layer

reinforcing polyester grid

acrylic dispersion without solvents

release liner

silicone coated paper

# ■ TECHNICAL DATA

| Properties   | standard   | value                 | USC conversion |
|--|------------|-----------------------|----------------|
| Total thickness  | EN 1942    | 0,32 mm               | 12.6 mil       |
| Tear strength  | EN ISO 527 | 70 N/10 mm            | 40 lbf/in      |
| Elongation at failure  | EN ISO 527 | 500%                  | -              |
| Adhesiveness   | EN 1939    | 35 N/25 mm            | 8 lbf/in       |
| Water vapour transmission (Sd)   | EN 1931    | 20 m                  | 0.17 US perm   |
| Water vapour resistance factor (µ)   | EN 1931    | 28500                 | 47.03 MN·s/g   |
| Watertightness   | -          | conforming            | -              |
| UV resistance with joints up to 50 mm wide exposing up to 40% of the surface | -          | permanent             | -              |
| UV resistance  | -          | 12 months             | -              |
| Temperature resistance   | -          | -40 / +120 °C         | -40 / +248 °F  |
| Application temperature  | -          | > -10 °C              | > +14 °F       |
| Storage temperature <sup>(1)</sup>   | -          | +5 / +25 °C           | +41 / +77 °F   |
| VOC emissions  | ISO 16000  | 130 μg/m <sup>3</sup> | -              |

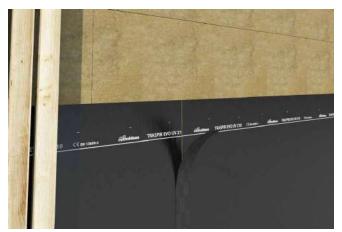
<sup>(1)</sup> Store the product in a dry, covered location. Waste classification (2014/955/EU): 08 04 10.

# **CODES AND DIMENSIONS**

| CODE       | В    | L   | В    | L    |    |
|------------|------|-----|------|------|----|
|            | [mm] | [m] | [in] | [ft] |    |
| FACADEUV60 | 60   | 25  | 2.4  | 82   | 10 |







# ■ RELATED PRODUCTS



TRASPIR EVO UV 115 page 254



THERMOWASHER page 145



DGZ page 144



# **SAFETY**

High adhesion even at high and low temperatures, for a secure, airtight fastening.

# HEAT-RESISTANT UP TO 120°C

The combination of glue and polypropylene carrier makes it possible to achieve very high thermal stability without compromising the glue adhesion and viscosity.

# **I SOLID BAND**



# ROBUST SINGLE-SIDED ADHESIVE TAPE SUITABLE FOR LOW TEMPERATURES

#### VERSATILE

It can be supplied with either a pre-cut or full liner, making it suitable for sealing concave or convex parts with great precision.

#### **EXTREMELY STRONG**

The special modified polymer carrier ensures high resistance to mechanical stress without deformation during use.

# COMPOSITION

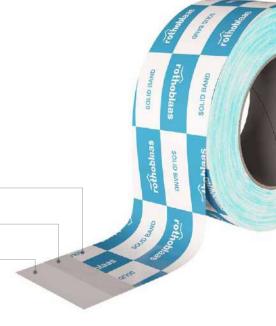
support PP film

glue

acrylic dispersion without solvents

release liner

silicone coated paper



# ■ TECHNICAL DATA

| Properties                        | standard    | value        | USC conversion |
|-----------------------------------|-------------|--------------|----------------|
| Thickness                         | -           | 0,24 mm      | 9.5 mil        |
| Adhesion to OSB                   | ASTM D3330  | 2,6 N/10mm   | ≥ 1.48 lbf/in  |
| Adhesion to steel                 | ASTM D3330  | 2,6 N/10mm   | ≥ 1.48 lbf/in  |
| Adhesion to vinyl                 | ASTM D3330  | 2,6 N/10mm   | ≥ 1.48 lbf/in  |
| Adhesion to plywood               | ASTM D3330  | 2,6 N/10mm   | ≥ 1.48 lbf/in  |
| Adhesion to its cladding material | ASTM D3330  | 2,6 N/10mm   | ≥ 1.48 lbf/in  |
| Elongation at failure             | ASTM D 1000 | ≥ 400 %      | -              |
| Water vapour transmission (Sd)    | -           | > 18 m       | < 0.19 US perm |
| UV-resistant                      | -           | 3 months     | -              |
| Tightness in heavy rain           | -           | conforming   | -              |
| Application temperature           | -           | -18 / +40°C  | -0.4 / +104 °F |
| Temperature resistance            | -           | -30 / +80 °C | -22 / +176 °F  |
| Storage temperature               | -           | +5 / +30 °C  | +41 / +86 °F   |

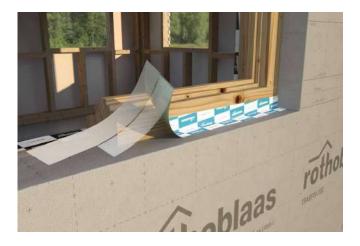
Waste classification (2014/955/EU): 08 04 10.

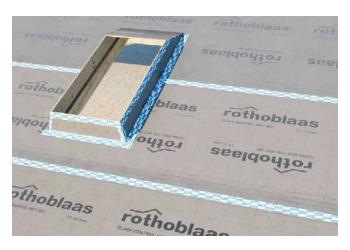
# CODES AND DIMENSIONS

| CODE      | liner   | В    | L   | liner     | В    | L    |    |
|-----------|---------|------|-----|-----------|------|------|----|
|           | [mm]    | [mm] | [m] | [in]      | [in] | [ft] |    |
| SOLID60   | 60      | 60   | 25  | 2.4       | 2.4  | 82   | 10 |
| SOLID3030 | 30 / 30 | 60   | 25  | 1.2 / 1.2 | 2.4  | 82   | 10 |









#### PRODUCT RANGE









# LOW TEMPERATURES -18°C

It has excellent adhesion at low temperatures without the need for primer or heating.

# PRE-SHAPEABLE

The special mix of the support ensures high workability even in extremely harsh environmental conditions, allowing the pre-cut liner to be pre-bent and removed as desired.

# **I SMART BAND**



# UNIVERSAL SINGLE-SIDED TAPE WITH SEPARABLE LINER

#### SPECIAL LINER

The product has a unique separating film which, thanks to a special treatment, can be divided at any point without pre-cutting, thus adapting to any installation requirement.

#### **FLASHING TAPE**

It meets all the requirements to be classified as a tape for sealing external doors or windows, ensuring maximum safety even in case of stagnating water.

#### COMPOSITION

support

PE special film

support

UV-stabilised PE film

glue

acrylic dispersion without solvents

release liner

PP film with easy splitting

#### ■ TECHNICAL DATA

| Properties                        | standard    | value        | USC conversion   |
|-----------------------------------|-------------|--------------|------------------|
| Thickness                         | -           | 0,24 mm      | 9.5 mil          |
| Adhesion to OSB                   | ASTM D3330  | ≥ 5 N/10mm   | ≥ 2.86 lbf/in    |
| Adhesion to steel                 | ASTM D3330  | ≥ 12 N/10mm  | ≥ 6.85 lbf/in    |
| Adhesion to vinyl                 | ASTM D3330  | ≥ 5 N/10mm   | ≥ 2.86 lbf/in    |
| Adhesion to plywood               | ASTM D3330  | ≥ 5 N/10mm   | ≥ 2.86 lbf/in    |
| Adhesion to its cladding material | ASTM D3330  | ≥ 10 N/10mm  | ≥ 5.71.86 lbf/in |
| Tensile strength                  | ASTM D 1000 | 3000 N/mm    | 17.13 lbf/mil    |
| Elongation at failure             | ASTM D 1000 | ≥ 400 %      | -                |
| Water vapour transmission (Sd)    | -           | > 18 m       | < 0.19 US perm   |
| UV-resistant                      | -           | 12 months    | -                |
| Tightness in heavy rain           | -           | conforming   | -                |
| Application temperature           | -           | -10 / +40°C  | +14 / +104 °F    |
| Temperature resistance            | -           | -30 / +80 °C | -22 / +176 °F    |
| Storage temperature               | -           | +5 / +30 °C  | +41 / +86 °F     |

In order to measure adhesion, it was necessary to avoid stretching by applying another tape to the support. Waste classification (2014/955/EU): 08 04 10.

# ■ CODES AND DIMENSIONS

| CODE     | В    | L   | В    | L    |    |
|----------|------|-----|------|------|----|
|          | [mm] | [m] | [in] | [ft] |    |
| SMART60  | 60   | 25  | 2.4  | 82   | 10 |
| SMART75  | 75   | 25  | 3.0  | 82   | 8  |
| SMART100 | 100  | 25  | 3.9  | 82   | 6  |
| SMART150 | 150  | 25  | 5.9  | 82   | 4  |







# ■ PRODUCT RANGE



SMART60



SMART75



SMART100



SMART150



# **PUNCTURE RESISTANT**

The special composition of the support makes it particularly resistant to tearing and mechanical stress, thanks to its high deformability.

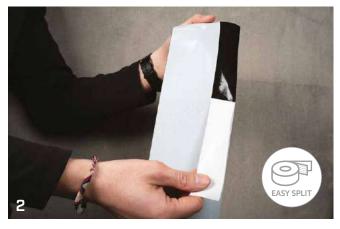
# **SMART**

The tape is unique and extremely versatile. Thanks to the easy-splitting liner, only a few sizes can be stored to meet any construction requirement.

# ■ RECOMMENDATIONS FOR INSTALLATION

# WINDOW HOLE SEALING

















- 3 MARLIN, CUTTER
- 5 HAMMER STAPLER 47, HAMMER STAPLER 22, HAND STAPLER, STAPLES

















# I PLASTER BAND

# SPECIAL HIGH-ADHESION TAPE, CAN BE ALSO PLASTERED

#### **EXCELLENT ADHESIVENESS**

Its excellent adhesiveness makes it ideal for application on most surfaces, even at low temperatures.

#### **CAN BE PLASTERED**

Thanks to its special composition, it controls the flow of vapour perfectly and also guarantees a perfect airtightness.

# COMPOSITION

support

breathable 2-layer PP membrane

acrylic dispersion without solvents

release liner

silicone coated paper



# CODESANDDIMENSIONS

#### PLASTER BAND

| CODE        | liner | В    | t    | Т    | L   | liner | В    | L    |    |
|-------------|-------|------|------|------|-----|-------|------|------|----|
|             | [mm]  | [mm] | [mm] | [mm] | [m] | [in]  | [in] | [ft] |    |
| 1 PLASTER60 | 60    | 60   | _    | 60   | 25  | 2.4   | 2.4  | 82   | 10 |

#### PLASTER BAND IN

|   | CODE         | liner    | В    | t    | Т    | L   | liner     | В    | L    |   |
|---|--------------|----------|------|------|------|-----|-----------|------|------|---|
|   |              | [mm]     | [mm] | [mm] | [mm] | [m] | [in]      | [in] | [ft] |   |
|   | PLASTIN1560  | 15 / 60  | 75   | -    | 75   | 25  | 0.6 / 2.4 | 3.0  | 82   | 5 |
| 2 | PLASTIN1585  | 15 / 85  | 100  | -    | 100  | 25  | 0.6 / 3.4 | 4.0  | 82   | 4 |
|   | PLASTIN15135 | 15 / 135 | 150  | -    | 150  | 25  | 0.6 / 5.3 | 5.9  | 82   | 2 |
|   | PLASTIN7520  | 75       | 75   | 20   | 75   | 25  | 3.0       | 3.0  | 82   | 5 |
| 3 | PLASTIN10020 | 100      | 100  | 20   | 100  | 25  | 3.9       | 3.9  | 82   | 4 |
|   | PLASTIN15020 | 150      | 150  | 20   | 150  | 25  | 5.9       | 5.9  | 82   | 2 |

#### PLASTER BAND OUT

|   | CODE          | liner    | В    | t    | Т    | L   | liner     | В    | L    |   |
|---|---------------|----------|------|------|------|-----|-----------|------|------|---|
|   |               | [mm]     | [mm] | [mm] | [mm] | [m] | [in]      | [in] | [ft] |   |
|   | PLASTOUT1560  | 15 / 60  | 75   | -    | 75   | 25  | 0.6 / 2.4 | 3.0  | 82   | 5 |
| 2 | PLASTOUT1585  | 15 / 88  | 100  | -    | 100  | 25  | 0.6 / 3.4 | 4.0  | 82   | 4 |
| _ | PLASTOUT15135 | 15 / 135 | 150  | -    | 150  | 25  | 0.6 / 5.3 | 5.9  | 82   | 2 |
|   | PLASTOUT15185 | 15 / 185 | 200  | -    | 200  | 25  | 0.6 / 7.3 | 7.9  | 82   | 2 |
|   | PLASTOUT7520  | 75       | 75   | 20   | 75   | 25  | 3.0       | 3.0  | 82   | 5 |
| 2 | PLASTOUT10020 | 100      | 100  | 20   | 100  | 25  | 3.9       | 3.9  | 82   | 4 |
| 3 | PLASTOUT15020 | 150      | 150  | 20   | 150  | 25  | 5.9       | 5.9  | 82   | 2 |
|   | PLASTOUT20020 | 200      | 200  | 20   | 200  | 25  | 7.9       | 7.9  | 82   | 2 |

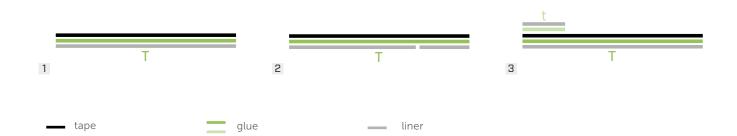








#### RANGE





# RESISTANT SEPARATION FILM

The PP liner allows the tape to be applied even in tight spaces and corners, avoiding the risk of the tape breaking when it is removed.

# **EASY INSTALLATION AND AESTHETIC PERFORMANCE**

The pre-cut liner allows for precise and fast application with a high level of aesthetics and the possibility of perfectly concealing the tape behind claddings or plaster.

# I PLASTER BAND IN

# COMPOSITION support 2-layer PP vapour control membrane adhesive acrylic dispersion without solvents release liner easy-release PP film

# COMPOSITION

support 2-layer PP vapour control membrane adhesive acrylic dispersion without solvents release liner easy-release PP film



# **■ TECHNICAL DATA**

| Properties                         | standard        | value  | USC conversion           |
|------------------------------------|-----------------|--|--------------------------|
| Total thickness                    | DIN 53855       | 0,5 mm   | 20 mil                   |
| Mass per unit area                 | EN 1848-2       | 300 g/m <sup>2</sup>   | 113.9 oz/ft <sup>2</sup> |
| Water vapour transmission (Sd)     | EN 1931         | > 10 m   | < 0.35 US perm           |
| Maximum tensile force MD/CD        | EN 12311-1      | 115 / 75 N/50 mm   | 13.13/8.57 lbf/in        |
| Elongation MD/CD                   | EN 12311-1      | 75 / 80%   | -                        |
| Watertightness                     | EN 13984        | W1   | -                        |
| Tightness in heavy rain            | EN 1027         | ≥ 1050 Pa  | -                        |
| Air permeability                   | EN 1026         | $\leq 0.1  \text{m}^3 / (\text{h} \cdot \text{m} \cdot (\text{daPa})^{2/3})$ | -                        |
| UV-resistant                       | -               | 3 months   | -                        |
| Reaction to fire                   | EN 13501-1      | class E  | -                        |
| Application temperature            | -               | > +5 °C  | > +41 °F                 |
| Temperature resistance             | -               | -40 / +80 °C   | -40 / +176 °F            |
| Storage temperature <sup>(1)</sup> | -               | +5 / +25 °C  | +41 / +77 °F             |
| Solvents                           | -               | no   | -                        |
| Emicode                            | GEV test method | EC1 plus   | -                        |

<sup>(1)</sup> Store the product in a dry, covered location for no more than 24 months. Waste classification (2014/955/EU): 08 04 10.

# I PLASTER BAND OUT

# COMPOSITION

support

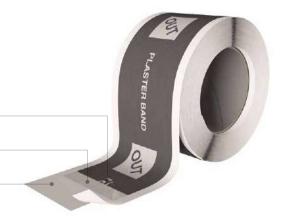
breathable 2-layer PP membrane

adhesive

acrylic dispersion without solvents

release liner

easy-release PP film



# COMPOSITION

support

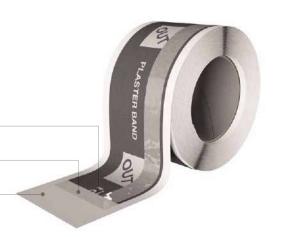
breathable 2-layer PP membrane

adhesive

acrylic dispersion without solvents

release liner

easy-release PP film



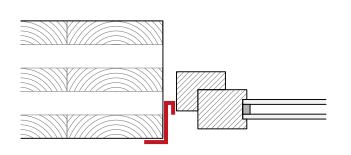
# **■ TECHNICAL DATA**

| Properties                         | standard        | value   | USC conversion |
|------------------------------------|-----------------|---|----------------|
| Total thickness                    | DIN 53855       | 0,7 mm  | 28 mil         |
| Mass per unit area                 | EN 1848-2       | 360 g/m <sup>2</sup>  | -              |
| Water vapour transmission (Sd)     | EN 1931         | < 1 m   | > 3.5 US perm  |
| Maximum tensile force MD/CD        | EN 12311-1      | 290 / 190 N/50 mm   | -              |
| Elongation MD/CD                   | EN 12311-1      | 75 / 135%   | -              |
| Watertightness                     | EN 13984        | W1  | -              |
| Tightness in heavy rain            | EN 1027         | ≥ 1050 Pa   | -              |
| Air permeability                   | EN 1026         | $\leq 0.1 \text{ m}^3/(\text{h}\cdot\text{m}\cdot(\text{daPa})^{2/3}$ | -              |
| UV-resistant                       | -               | 12 months   | -              |
| Reaction to fire                   | EN 13501-1      | class E   | -              |
| Application temperature            | -               | > -10 °C  | > +14 °F       |
| Temperature resistance             | -               | -40 / +80 °C  | -40 / +176 °F  |
| Storage temperature <sup>(1)</sup> | -               | +5 / +25 °C   | +41 / +77 °F   |
| Solvents                           | -               | no  | -              |
| Emicode                            | GEV test method | EC1 plus  | -              |

<sup>(1)</sup> Store the product in a dry, covered location for no more than 24 months. Waste classification (2014/955/EU): 08 04 10.

# ■ RECOMMENDATIONS FOR INSTALLATION | PLASTER BAND IN

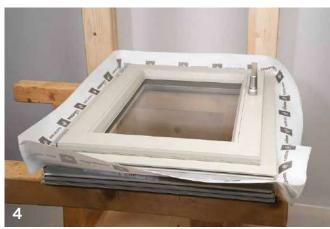
APPLICATION OF THE TAPE BEFORE INSTALLATION OF THE WINDOW/DOOR FRAME













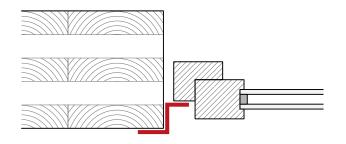




7 ROLLER

# ■ RECOMMENDATIONS FOR INSTALLATION | PLASTER BAND IN

SEALING WITH WINDOW/DOOR ALREADY INSTALLED











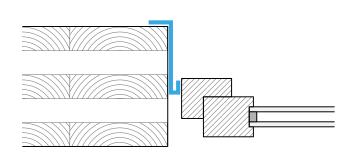






# ■ RECOMMENDATIONS FOR INSTALLATION | PLASTER BAND OUT

APPLICATION OF THE TAPE BEFORE INSTALLATION OF THE WINDOW/DOOR FRAME













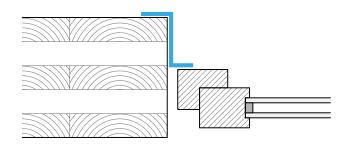




4 EXPAND BAND, WINDOW BAND, FRAME BAND

# ■ RECOMMENDATIONS FOR INSTALLATION | PLASTER BAND OUT

SEALING WITH WINDOW/DOOR ALREADY INSTALLED

















7 ROLLER

# I PLASTER BAND LITE

# TAPE WITH ADHESIVE MOUNTING STRIP, CAN BE PLASTERED

#### **COMPLETE RANGE**

Available in several variants to ensure tightness on every installation surface. Also suitable for high thickness values of insulation or cladding due to its width of up to 200 mm.

#### STEAM FLOW REGULATION

Available in two airtight versions for indoor and outdoor use. Indoor it acts as a vapour control layer, outdoor as a breathable layer.



# CODES AND DIMENSIONS

#### PLASTER BAND LITE IN

|   | CODE       | В    | t    | Т    | L   | В    | L    |   |
|---|------------|------|------|------|-----|------|------|---|
|   |            | [mm] | [mm] | [mm] | [m] | [in] | [ft] |   |
|   | PLAIN7520  | 75   | 20   | -    | 25  | 3.0  | 82   | 5 |
| 1 | PLAIN10020 | 100  | 20   | -    | 25  | 3.9  | 82   | 4 |
| ı | PLAIN15020 | 150  | 20   | -    | 25  | 5.9  | 82   | 2 |
|   | PLAIN20020 | 200  | 20   | -    | 25  | 7.9  | 82   | 2 |

Versions without glue are also available on request.

#### PLASTER BAND LITE IN WITH PLASTER GRID

|   | CODE        | В             | t    | Т    | L   | В             | L    |   |
|---|-------------|---------------|------|------|-----|---------------|------|---|
|   |             | [mm]          | [mm] | [mm] | [m] | [in]          | [ft] |   |
|   | PLAINN7020  | 130 (70 + N)  | 20   | -    | 30  | 5.1 (2.8 + N) | 98   | 1 |
| _ | PLAINN12020 | 180 (120 + N) | 20   | -    | 30  | 7.1 (4.7 + N) | 98   | 1 |

# PLASTER BAND LITE OUT

|   | CODE        | В    | t    | Т    | L   | В    | L    |   |
|---|-------------|------|------|------|-----|------|------|---|
|   |             | [mm] | [mm] | [mm] | [m] | [in] | [ft] |   |
|   | PLAOUT7520  | 75   | 20   | -    | 25  | 3.0  | 82   | 5 |
| 1 | PLAOUT10020 | 100  | 20   | -    | 25  | 3.9  | 82   | 4 |
| 1 | PLAOUT15020 | 150  | 20   | -    | 25  | 5.9  | 82   | 2 |
|   | PLAOUT20020 | 200  | 20   | -    | 25  | 7.9  | 82   | 2 |

Versions without glue are also available on request.

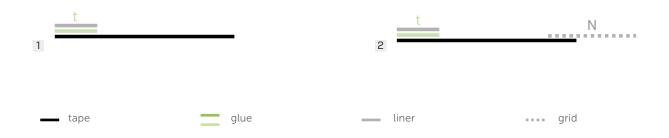








# RANGE





# **COST-PERFORMANCE**

The packaging and the mix of glue and carrier made it possible to obtain a very good product at a low cost.

# **CAN BE PLASTERED**

Technical fabric ideal for application under plaster. Also available in a version with a plaster grid for indoor use.

# I PLASTER BAND LITE IN

# COMPOSITION

support

3-layer PP vapour control membrane

adhesive

acrylic dispersion without solvents

release liner

PP film



# COMPOSITION

plaster grid

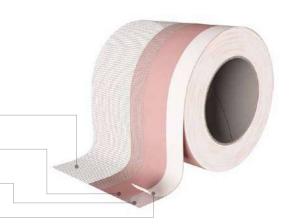
support

3-layer PP vapour control membrane

acrylic dispersion without solvents

release liner

PP film



# **■ TECHNICAL DATA**

| Properties                         | standard     | value            | USC conversion      |
|------------------------------------|--------------|------------------|---------------------|
| Thickness                          | -            | 0,5 mm           | 20 mil              |
| Water vapour transmission (Sd)     | EN ISO 12572 | ≥ 10 m           | ≤ 0.35 US perm      |
| Maximum tensile force MD/CD        | EN 12311-1   | 115 / 75 N/50 mm | 13.13 / 8.57 lbf/in |
| Elongation at break point MD/CD    | EN 12311-1   | ≥ 40 /≥ 70%      | -                   |
| Watertightness                     | EN 1928      | conforming       | -                   |
| UV-resistant                       | -            | 3 months         | -                   |
| Application temperature            | -            | +5 / +35 °C      | +41 / +95 °F        |
| Temperature resistance             | -            | -40 / +80 °C     | -40 / +176 °F       |
| Storage temperature <sup>(1)</sup> | -            | +1 / +25 °C      | +33.8 / +77 °F      |
| Solvents                           | -            | no               | -                   |

 $\ensuremath{^{(1)}}\mbox{Store}$  the product in a cool, dry place for no more than 12 months. Waste classification (2014/955/EU): 08 04 10.

# I PLASTER BAND LITE OUT

# COMPOSITION

support

breathable three-layer PP membrane

adhesive

acrylic dispersion without solvents

release liner

easy-release PP film



# ■ TECHNICAL DATA

| Properties                         | standard     | value             | USC conversion |
|------------------------------------|--------------|-------------------|----------------|
| Thickness                          | -            | 0,5 mm            | 20 mil         |
| Water vapour transmission (Sd)     | EN ISO 12572 | ≤ 1 m             | ≥ 3.5 US perm  |
| Tensile strength                   | EN 12311-1   | 290 / 190 N/50 mm | 33 / 22 lbf/in |
| Elongation at failure              | EN 12311-1   | ≥ 40 /≥ 70%       | -              |
| Watertightness                     | EN 1928      | conforming        | -              |
| UV-resistant                       | -            | 3 months          | -              |
| Application temperature            | -            | +5 / +35 °C       | +41 / +95 °F   |
| Temperature resistance             | -            | -40 / +80 °C      | -40 / +176 °F  |
| Storage temperature <sup>(1)</sup> | -            | +5 / +25 °C       | +41 / +77 °F   |
| Solvents                           | -            | no                | -              |

 $<sup>^{(1)}</sup> Store$  the product in a cool, dry place for no more than 12 months. Waste classification (2014/955/EU): 08 04 10.



# **BREATHABLE**

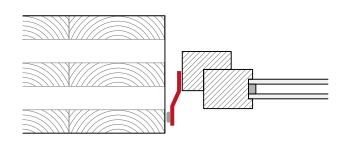
The product is made of a breathable membrane with the addition of an adhesive band. This also makes the product airtight and watertight.

# **TECHNICAL FABRIC**

The surface is designed for places which need subsequent smoothing with plaster.

# ■ RECOMMENDATIONS FOR INSTALLATION | PLASTER BAND LITE IN

APPLICATION OF THE TAPE BEFORE INSTALLATION OF THE WINDOW/DOOR FRAME

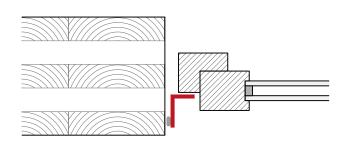








SEALING WITH WINDOW/DOOR ALREADY INSTALLED





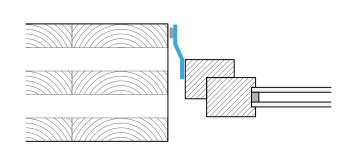




3 SUPERB GLUE, MEMBRANE GLUE, ECO GLUE

# ■ RECOMMENDATIONS FOR INSTALLATION | PLASTER BAND LITE OUT

APPLICATION OF THE TAPE BEFORE INSTALLATION OF THE WINDOW/DOOR FRAME



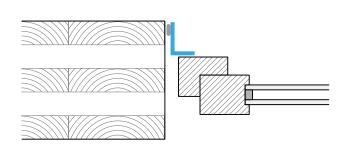






3 OUTSIDE GLUE

# SEALING WITH WINDOW/DOOR ALREADY INSTALLED









3 OUTSIDE GLUE

# FRONT BAND UV 210

# UNIVERSAL SINGLE-SIDED TAPE, HIGHLY RESISTANT TO UV RAYS



# **AESTHETICS**

Support made of monolithic TRASPIR EVO UV 210 membrane for excellent aesthetic performance even when applied with TRASPIR EVO 300.

#### REACTION TO FIRE B-s1,d0

Self-extinguishing tape that does not spread the flame in case of fire, contributing to the passive protection of the structure.

#### COMPOSITION

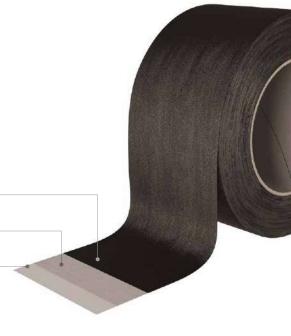
support

TRASPIR EVO UV 210

glue

acrylic dispersion without solvents

release liner PP film



# ■ TECHNICAL DATA

| Properties   | standard     | value         | USC conversion |
|--|--------------|---------------|----------------|
| Total thickness  | DIN EN 1942  | 0,6 mm        | 24 mil         |
| Tear strength  | DIN EN 14410 | ≥ 100 N/25 mm | ≥ 22.84 lbf/in |
| Expansion capacity   | DIN EN 14410 | 20%           | -              |
| Adhesiveness   | DIN EN 1939  | ≥ 30 N/25 mm  | ≥ 6.85 lbf/in  |
| Water vapour transmission (Sd)   | EN 1931      | 0,1 m         | 35 US perm     |
| UV resistance with joints up to 50 mm wide exposing up to 40% of the surface | -            | permanent     | -              |
| Reaction to fire   | EN 13501-1   | class B-s1,d0 | -              |
| Watertightness   | -            | conforming    | -              |
| Temperature resistance   | -            | -30 / +100 °C | -22 / +212 °F  |
| Application temperature  | -            | +5 / +40 °C   | +41 / +104 °F  |
| Storage temperature <sup>(1)</sup>   | -            | +5 / +25 °C   | +41 / +77 °F   |
| Solvents   | -            | no            | -              |

<sup>&</sup>lt;sup>(1)</sup>Store the product in a dry, covered location. Waste classification (2014/955/EU): 08 04 10.

# ■ CODES AND DIMENSIONS

| CODE      | В    | L   | В    | L    |   |
|-----------|------|-----|------|------|---|
|           | [mm] | [m] | [in] | [ft] |   |
| FRONTUV75 | 75   | 20  | 3.0  | 66   | 8 |





#### ■ FIRE PROTECTION



TRASPIR EVO UV 210 page 270



FIRE FOAM page 118



FIRE SEALING page 122 -124



# FIRE PROTECTION

The combination with TRASPIR EVO UV 210 or TRASPIR EVO 300 offers the first B-s1,d0 tested system available on the market.

# HEAT-RESISTANT UP TO 100°C

The product carrier is made from a new generation monolithic membrane, ensuring high levels of thermal and UV stability.

# I TERRA BAND UV

# **BUTYL ADHESIVE TAPE**



#### **DECKS AND FACADES**

Ideal for protecting joists from water and UV rays. Can be used for both patios and façades, protecting and extending the life of the wooden joists.

# PERMANENT UV STABILITY

The aluminised support guarantees unlimited resistance to UV radiation that can penetrate between open joints of patios and façades.

#### COMPOSITION

support

UV-stable anthracite-coloured reinforced aluminium film

grey adhesive butyl compound

release liner

PE film

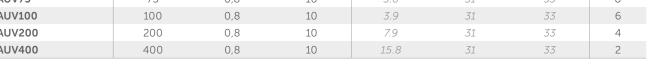
# ■ TECHNICAL DATA

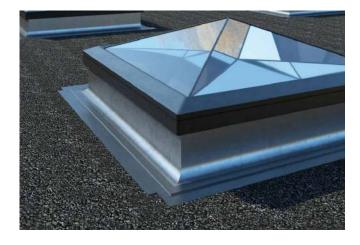
| Properties                         | standard    | value                | USC conversion       |
|------------------------------------|-------------|----------------------|----------------------|
| Initial Tack                       | ASTM D 2979 | 8 N                  | 1.8 lbf              |
| Adhesion on steel at 180°          | ASTM D 1000 | 20 N/cm              | 11.42 lbf/in         |
| Vertical sliding                   | ISO 7390    | 0 mm                 | -                    |
| Maximum tensile force MD/CD        | EN 12311-1  | 185 / 200 N/50 mm    | 21.13 / 22.84 lbf/in |
| Elongation at break point MD/CD    | EN 12311-1  | 10 / 20 %            | -                    |
| Water vapour resistance factor (µ) | UNI EN 1931 | 2720000              | 10880 MN·s/g         |
| Reaction to fire                   | EN 13501-1  | class E              | -                    |
| Temperature resistance             | -           | -30 / +90 °C         | -22 / 194 °F         |
| Application temperature            | -           | 0 / +40 °C           | +32 / 104 °F         |
| Watertightness                     | -           | conforming           | -                    |
| UV-resistant                       | -           | permanent            | -                    |
| Storage temperature <sup>(1)</sup> | -           | +5 / +40 °C          | +41 / 104 °F         |
| Solvents                           | -           | no                   | -                    |
| VOC emissions                      | ISO 16000   | 30 μg/m <sup>3</sup> | -                    |
| French VOC classification          | ISO 16000   | A+                   | -                    |

 $<sup>^{(1)}</sup>$ Store the product in a cool, dry place for no more than 12 months. Waste classification (2014/955/EU): 08 04 99.

# CODES AND DIMENSIONS

| CODE       | В    | s    | L   | В    | S     | L    |   |
|------------|------|------|-----|------|-------|------|---|
|            | [mm] | [mm] | [m] | [in] | [mil] | [ft] |   |
| TERRAUV75  | 75   | 0,8  | 10  | 3.0  | 31    | 33   | 8 |
| TERRAUV100 | 100  | 0,8  | 10  | 3.9  | 31    | 33   | 6 |
| TERRAUV200 | 200  | 0,8  | 10  | 7.9  | 31    | 33   | 4 |
| TERRAUV400 | 400  | 0,8  | 10  | 15.8 | 31    | 33   | 2 |











# ■ PRODUCT RANGE







TERRAUV100



TERRAUV200



TERRAUV400



# **SELF-SEALING AND SHAPEABLE**

Soft and easily workable tape. The mix closes over the perforations and remains perfectly watertight.

# SPECIAL BUTYL MIX

The modified butyl formulation allows excellent durability even when subjected to thermal and UV stress.

# PRIMER SPRAY

# UNIVERSAL SPRAY PRIMER FOR ACRYLIC ADHESIVE TAPES

#### **INSTANTANEOUS**

Thanks to spray can application and the adjustable nozzle, no brushes or other equipment is needed for installation.

#### HIGH PERFORMANCE

At a distance of approx. 30 - 50 cm from the surface approx. 6 cm of attaching area is achieved.

Ideal for use with Rothoblaas tapes.



# ■ TECHNICAL DATA

| Properties                                    | value                                     | USC conversion |
|---|---|----------------|
| Composition                                   | mix of thermoplastic adhesive and solvent | -              |
| Colour  | light amber                               | -              |
| Time required for drying (20 °C / 50 %RH)     | 1-2 minutes                               | -              |
| Application temperature (cartridge)           | +15 / +25°C                               | +59 / +77 °F   |
| Application temperature (support and ambient) | +15 / +25°C                               | +59 / +77 °F   |
| Temperature resistance once dried             | -10 / +100°C                              | +14 / +212 °F  |
| Solvents                                      | yes                                       | -              |
| French VOC classification                     | A+  | -              |
| VOC content                                   | 82% / 585 g/L                             | -              |
| Transport temperature                         | +5 / +50°C                                | +41 / +122 °F  |
| Storage temperature <sup>(1)</sup>            | +15 / +35 °C                              | +59 / +95 °F   |
| Storage time <sup>(2)</sup>                   | up to 12 months                           | -              |

(1) Store the product in a dry, covered location. (2) Check the expiry date on the cartridge. Waste classification (2014/955/EU): 16 05 04. Aerosol 1 - H222, H229.

# ■ CODES AND DIMENSIONS

| CODE        | content | content    |    |
|-------------|---------|------------|----|
|             | [mL]    | [US fl oz] |    |
| PRIMERSPRAY | 750     | 25.36      | 12 |



# **FAST INSTALLATION**

It allows even the roughest and most fibrous surfaces to be smoothed to accommodate the application of taping or sealants.

# **ADJUSTABLE**

Adjustable nozzle for a more precise application adapted to each situation. Simply turn the nozzle to increase or decrease the spray area.

# PRIMER





# UNIVERSAL PRIMER FOR ACRYLIC ADHESIVE **TAPES**

#### **UNOBTRUSIVE**

Transparent, thanks to the solvent - free acrylic dispersion mixture.

#### **PRACTICAL**

Ready to use, compensates for irregularities on rough surfaces and guarantees fast drying.



# ■ TECHNICAL DATA

| Properties   | value                          | USC conversion          |
|--|--------------------------------|-------------------------|
| Composition  | acrylic dispersion without sc  | olvents -               |
| Density EN 542 +20 °C                              | approx. 1,02 g/cm <sup>3</sup> | 0.59 oz/in <sup>3</sup> |
| Viscosity  | approx. 1700 mPa·s             | -                       |
| Time required for complete drying (20 °C / 50 %RH) | approx. 15 min                 | -                       |
| Application temperature (cartridge)                | +5 / +30 °C                    | +41 / +86 °F            |
| Application temperature (ambient and support)      | -10 / +30 °C                   | +14 / +86 °F            |
| Temperature resistance once dried                  | -30 / +80 °C                   | -22 / +176 °F           |
| French VOC classification                          | A+                             | -                       |
| Emicode (GEV test procedure)                       | EC1+                           | -                       |
| VOC content  | 0% - 0 g/L                     | -                       |
| Transport temperature                              | -26 / +35 °C                   | -14.8 / +95 °F          |
| Storage temperature <sup>(1)</sup>                 | +15 / +25 °C                   | +59 / +77 °F            |

 $<sup>^{(1)}</sup>$ Store the product in a cool, dry place for no more than 12 months. Check the expiry date on the cartridge. Waste classification (2014/955/EU): 08 04 16. EUH208 Contains CAS 55965-84-9 (3:1), CAS 2634-33-5. May produce an allergic reaction; EUH210 Safety data sheet available on request.

# ■ CODES AND DIMENSIONS

| CODE   | content | yield     | content    | yield          |   |
|--------|---------|-----------|------------|----------------|---|
|        | [mL]    | [mL/m²]   | [US fl oz] | [US fl oz/ft²] |   |
| PRIMER | 1000    | 100 / 200 | 33.81      | 0.32 / 0.63    | 6 |



# **PACKAGING**

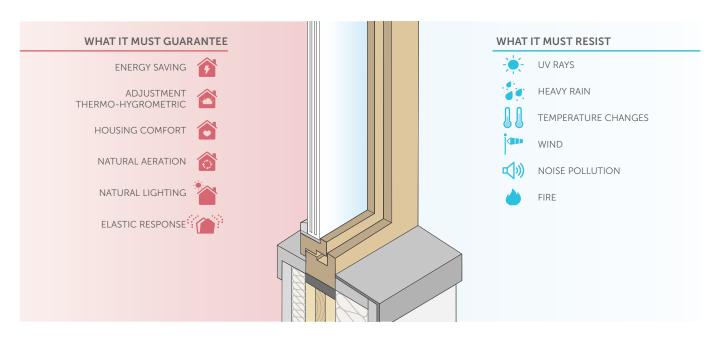
The new packaging allows immediate installation without the need for additional tools.

# RE-CLOSABLE

The cap seals the package hermetically, ensuring longer product life and preventing accidental spillage during transport.

# I DOORS, WINDOWS AND STRUCTURE

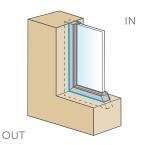
To ensure its effectiveness, a window/door must always be installed taking into account the principle of continuity of the wind and air tightness levels (see introduction on page 8). An improperly installed high-performance window or door frame will compromise the overall performance of the system and will not meet the needs of the end user.



#### THREE LEVELS OF PROTECTION

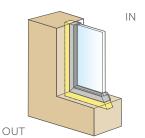
The three level method, which is used often in most European countries, identifies the airtightness, windtightness and thermal-acoustic insulation levels for proper placement of doors and windows. To obtain maximum performance, it is important to take care in all design stages and Rothoblaas offers specific solutions for each of the three levels.

#### WIND TIGHTNESS LEVEL



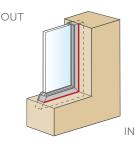
The most external level must guarantees protection against weather. If not properly treated, it can lead to problems of infiltration and accumulation of stagnant water at the bottom of the window hole.

#### THERMAL AND ACOUSTIC INSULATION LEVEL



The intermediate level must guarantee thermal-acoustic performance and mechanical fixing. When choosing products, bear in mind that a good anti-noise solution is not always thermally effective.

# AIRTIGHTNESS LEVEL



The most internal level must be airtight. Its function is to prevent the passage of vapour laden air, which could create condensation in the joints and mould on the surface.

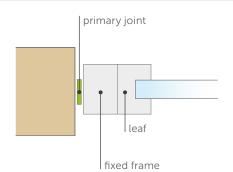
Rothoblaas offers: START BAND, PROTECT, BYTUM BAND, FLEXI BAND, FLEXI BAND UV, FACADE BAND UV, SOLID BAND, SMART BAND, PLASTER BAND, PLASTER BAND LITE, MANICA PLASTER, TERRA BAND, ALU BUTYL BAND, BLACK BAND, MS SEAL

Rothoblaas offers: EXPAND BAND, WINDOW BAND, FRAME BAND, EASY FOAM, HERMETIC FOAM, FIRE FOAM

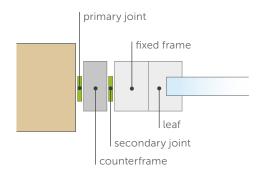
Rothoblaas offers: SEAL BAND, FLEXI BAND, SOLID BAND, SMART BAND, PLASTER BAND, PLASTER BAND LITE, MANICA PLASTER, BLACK BAND, MS SEAL

#### PRIMARY JOINT AND SECONDARY JOINT

#### INSTALLATION WITHOUT COUNTERFRAME

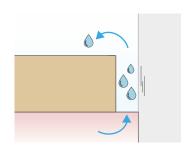


#### INSTALLATION WITH COUNTERFRAME

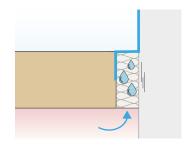


The **PRIMARY JOINT** is the first installation node between the structure and the counterframe. The **SECONDARY JOINT** is the junction between the counterframe and the frame.

#### CORRECT DESIGN OF THE INSTALLATION JOINT



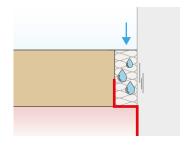




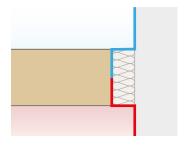


If the design or installation does not adequately take care of any of the three levels, there is a high probability of condensation and water infiltration into the structure.

The inner protection level is not sealed, but the outer level is sealed: there is a high risk of humidity-laden internal air penetrating the joints and forming condensation in the intermediate level.





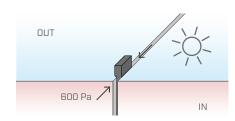




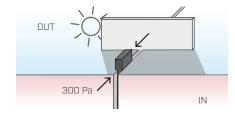
The inner protection level is sealed, the outer level is not: the joint is not effectively protected against wind and rain from outside.

The three levels of protection are correctly designed and executed: the joint performs perfectly from an acoustic and thermo-hygrometric point of view.

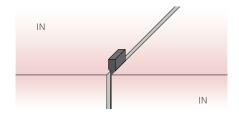
#### FOCUS: THERMAL AND ACOUSTIC INSULATION LEVEL



BG1: in accordance with DIN 18542, BG1 tapes are suitable for outdoor use even when exposed to UV light and are watertight under a pressure of at least 600 Pa.



BG2: according to DIN 18542, BG2 tapes are suitable for outdoor use if not directly exposed to UV light; they guarantee watertightness under a pressure of at least 300 Pa.



BGR: according to DIN 18542, BGR tapes are not suitable for outdoor use and are impermeable to air and water vapour.

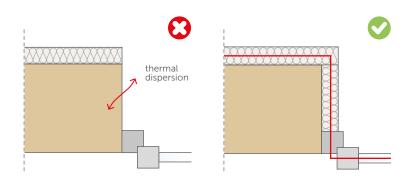
#### THE WINDOW AND DOOR INSTALLATION PLAN AND ITS EFFECTS

Several factors determine this aspect: ranging from the building tradition of the place where the structure is built, the client's habits, the type of construction chosen. However, it is important to consider that the choice of window/door frame installation plan has an impact on the temperature trend in the construction node, and therefore on the general effectiveness of the installation. Continuity with the insulating layer that may be present in the layers of the wall should be searched for.

#### INTERNAL FLUSH INSTALLATION

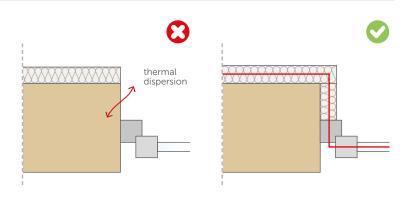
Some traditional local systems prefer it because it allows the full opening of the window/door. However, this is not an optimal solution from a thermal point of view, as the window/door is moved inwards and the risk of low internal surface temperatures is greater.

In order to avoid thermal bridges in buildings with external insulation, it is recommended that the side walls of the window hole are also insulated to join them to the external insulation.



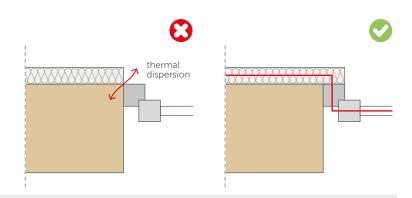
#### CENTRAL FLUSH INSTALLATION

It is the most common in traditional building systems. It is advisable to also insulate the side walls of the window hole in order to join them to the external insulation and avoid thermal bridges. For frame structures with an insulated gap, this solution is also suitable. The mechanical connection of the window/door is made directly to the load-bearing structure of the building.



#### EXTERNAL FLUSH INSTALLATION

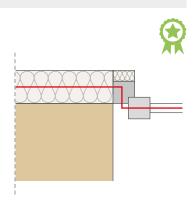
The external insulation must cover the fixed frame of the window/door and the subframe, if present, ensuring excellent internal surface temperatures. The mechanical connection of the window/door is made directly to the load-bearing structure of the building.



#### INSTALLATION IN THE INSULATION LAYER

This solution is adopted in the most high-performance constructions. It allows the reduction of the linear thermal bridge value. It requires more care when installing the window/door and greater insulation thickness.

The mechanical connection of the window/door to the structure can be made by means of a timber counterframe suitably shaped in L or Z or by means of metal brackets. This is the configuration that allows to design the isothermal lines in the best possible way to avoid any thermal bridges.



#### MASONRY STRUCTURE

#### INSTALLATION WITH FLUSH COUNTERFRAME

# FLEXI BAND FLEXI BAND UV SOLID BAND SMART BAND PLASTER BAND PLASTER BAND LITE SEAL BAND EASY BAND FLEXI BAND PLASTER BAND PLASTER BAND LITE MANICA PLASTER ΕΧΡΑΝΠ ΒΑΝΠ WINDOW BAND FRAME BAND EASY FOAM HERMETIC FOAM MS SEAL FIRE FOAM SMART BAND START BAND

#### **CLT STRUCTURE**

PROTECT

BYTUM BAND

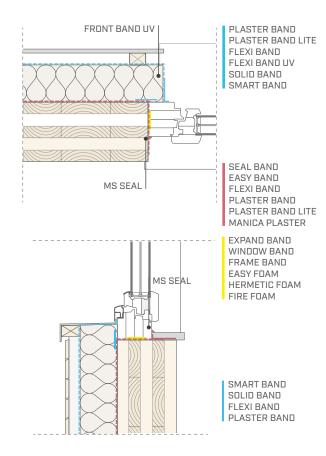
SOLID BAND

TERRA BAND

MANICA PLASTER

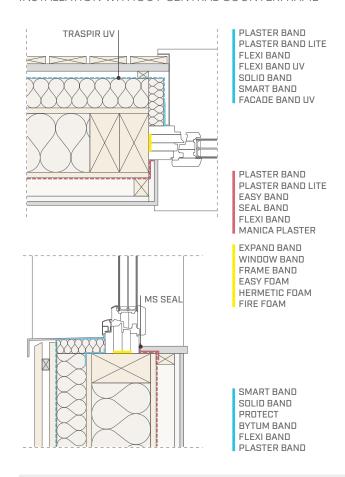
ALU BUTYLBAND

#### INSTALLATION WITHOUT COUNTERFRAME FLUSH WITH THE OUTSIDE



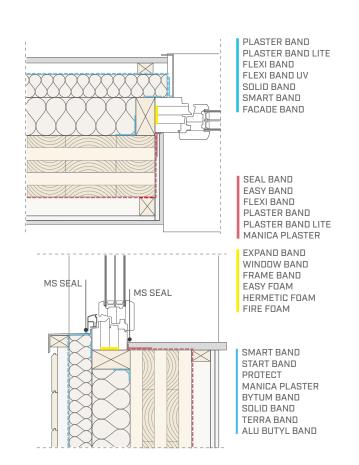
#### TIMBER FRAME STRUCTURE

#### INSTALLATION WITHOUT CENTRAL COUNTERFRAME



#### **CLT STRUCTURE**

#### INSTALLATION WITH COUNTERFRAME



# **EXPAND BAND**

# SELF-EXPANDING SEALING TAPE

D DIN 18542 BG 1

#### PERMANENT ELASTIC EXPANSION

The tape self-expansion remains elastic and unchanged over time, providing protection from water, dust and wind.

#### **SAFETY**

The modified polyurethane foam has passed the most stringent tests on harmful emissions, ensuring safe installation even indoors.

# COMPOSITION

#### EXPAND BAND

elastic polyurethane foam with additives

release liner

silicone coated paper

#### **EXPAND BAND EVO**

elastic polyurethane foam with special film additives



# CODES AND DIMENSIONS

#### **EXPAND BAND**

| CODE        | В    |    | s   | L   | В    |     | 5    | L    |    |
|-------------|------|----|-----|-----|------|-----|------|------|----|
|             | [mm] | [m | nm] | [m] | [in] | [m  | nil] | [ft] |    |
| EXPAND1014  | 10   | 1  | 4   | 13  | 0.4  | 39  | 157  | 43   | 48 |
| EXPAND1514  | 15   | 1  | 4   | 13  | 0.6  | 39  | 157  | 43   | 32 |
| EXPAND1549  | 15   | 4  | 9   | 8   | 0.6  | 157 | 354  | 26   | 32 |
| EXPAND15615 | 15   | 6  | 15  | 6   | 0.6  | 236 | 591  | 20   | 32 |
| EXPAND20920 | 20   | 9  | 20  | 4   | 0.8  | 354 | 787  | 13   | 24 |
| EXPAND40615 | 40   | 6  | 15  | 8   | 1.6  | 236 | 591  | 26   | 12 |
| EXPAND60615 | 60   | 6  | 15  | 8   | 2.4  | 236 | 591  | 26   | 8  |

#### **EXPAND BAND EVO**

| CODE          | В    | s    | L   | В    | s      | L    |    |
|---------------|------|------|-----|------|--------|------|----|
|               | [mm] | [mm] | [m] | [in] | [mil]  | [ft] |    |
| EXPANDEVO1014 | 10   | 1 4  | 20  | 0.4  | 39 157 | 66   | 48 |

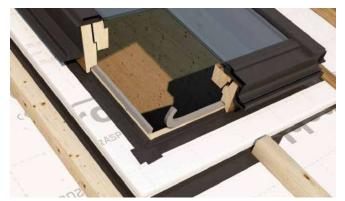
### ■ TECHNICAL DATA

| Properties                                  | standard     | value   | USC conversion      |
|---|--------------|---|---------------------|
| Classification                              | DIN 18542    | BG 1  | -                   |
| Airtightness                                | EN 12114     | $\alpha \le 1.0 \text{ m}^3/(\text{h}\cdot\text{m}\cdot(\text{daPa})^n$ | -                   |
| Tightness in heavy rain                     | EN 1027      | ≥ 750 Pa  | -                   |
| Resistance to UV and weathering             | DIN 18542    | compliant with class BG 1   | -                   |
| Compatibility with other building materials | DIN 18542    | compliant with class BG 1   | -                   |
| Water vapour transmission (Sd)              | EN ISO 12572 | < 0,5 m   | -                   |
| Reaction to fire                            | DIN 4102-1   | class B1  |                     |
| Thermal conductivity (λ)                    | EN 12667     | ≤ 0,043 W/(m·K)   | ≤ 0.025 BTU/h·ft·°F |
| Temperature resistance                      | -            | -30 / +90 °C  | -22 / +194 °F       |
| Application temperature                     | -            | ≥ +5 °C   | ≥ +41 °F            |
| Storage temperature <sup>(1)</sup>          | -            | +1 / +20 °C   | +33.8 / +68 °F      |

 $<sup>^{(1)}</sup>$  Store the product in a dry, covered location for no more than 24 months. Waste classification (2014/955/EU): 17 02 03.

### ■ FIELDS OF APPLICATION





### ■ RELATED PRODUCTS



**CUTTER** page 328



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KOMPRI CLAMP page 329



### **EVO VERSION**

The EVO version not only reduces waste and installation time because it has no separating layer, but also has a special film that keeps its shape without self-expanding as long as it is rolled up.

### SAFE PACKAGING

Supplied with a plastic core to prevent water and moisture absorption during construction, which could cause unwanted swelling.

### I WINDOW BAND

### SELF-EXPANDING SEALING TAPE FOR WINDOWS/DOORS

D DIN 18542 BG 1

### TRIPLE PROTECTION

It seals the joints of doors and windows from air and heavy rain while maintaining the thermal-acoustic properties over the entire depth.

#### **SELF-EXPANDING**

Seals cracks between 6 and 15 mm, adjusting to the surface, and also ensures air and water tightness, serving as a vapour control layer.

### COMPOSITION

elastic polyurethane foam with additives



### ■ TECHNICAL DATA

| Properties                                  | standard     | value   | USC conversion      |
|---|--------------|---|---------------------|
| Classification                              | DIN 18542    | BG 1  | -                   |
| Airtightness                                | EN 12114     | $\alpha \le 1.0 \text{ m}^3/(\text{h}\cdot\text{m}\cdot(\text{daPa})^n$ | -                   |
| Tightness in heavy rain                     | EN 1027      | ≥ 600 Pa  | -                   |
| Resistance to UV and weathering             | DIN 18542    | compliant with class BG 1   | -                   |
| Compatibility with other building materials | DIN 18542    | compliant with class BG 1   | -                   |
| Water vapour resistance factor (µ)          | EN ISO 12572 | < 100   | -                   |
| Vapour pressure gradient                    | -            | externally permeable  |                     |
| Reaction to fire                            | DIN 4102-1   | class B1  | -                   |
| Acoustic insulation of the joint            |              | 59 dB   |                     |
| Thermal conductivity (λ)                    | EN 12667     | ≤ 0.043 W/(m·K)   | ≤ 0.025 BTU/h·ft·°F |
| Temperature resistance                      | -            | -30 / +90 °C  | -22 / +194 °F       |
| Application temperature                     | -            | ≥ +5 °C   | ≥ +41 °F            |
| Storage temperature <sup>(1)</sup>          | -            | +1 / +20 °C   | +33.8 / +68 °F      |

<sup>(1)</sup> Store the product in a cool, dry place for no more than 24 months. Waste classification (2014/955/EU): 17 02 03.

### ■ CODES AND DIMENSIONS

| CODE        | В    |    | S   | L   | В    | S   | 5    | L    |   |
|-------------|------|----|-----|-----|------|-----|------|------|---|
|             | [mm] | [m | ım] | [m] | [in] | [m  | nil] | [ft] |   |
| WINDOW54615 | 54   | 6  | 15  | 15  | 2.1  | 236 | 591  | 49   | 7 |
| WINDOW74615 | 74   | 6  | 15  | 15  | 2.9  | 236 | 591  | 49   | 5 |

### ■ FIELDS OF APPLICATION









### ■ RELATED PRODUCTS



CUTTER page 328



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### **FAST INSTALLATION**

The advantage of this is that it saves a considerable amount of time during assembly. With just one product it is possible to seal the three layers without the need for additional products.

### PERFORMING BG1

Conforms with EnEV and RAL requirements, and guarantees a high level of thermal and acoustic insulation

### FRAME BAND

### SELF-EXPANDING SEALING TAPE FOR WINDOWS/DOORS

#### **HERMETIC**

Airtight and watertight, it interrupts possible acoustic bridges in the structure-window joint.

### **PRACTICAL**

Thanks to the adhesive strip, application is easy and precise without the need for further glue.



### DIN 18542 BG1

### ■ TECHNICAL DATA

| Properties                                   | standard   | value                                      | USC conversion    |
|--|--|--|-------------------|
| Classification                               | DIN 18542  | BG 1                                       | -                 |
| Air permeability (α)                         | EN 12114   | 0 m <sup>3</sup> /(h·m·(daPa) <sup>n</sup> | -                 |
| Thermal conductivity (λ)                     | EN 12667   | ≤ 0,048 W/(m·K)                            | 0.028 BTU/h·ft·°F |
| Water vapour transmission (Sd)               | EN ISO 12572                                     | indoor: 25 m<br>outdoor: 0,5 m             | -                 |
| Resistance to heavy rain                     | EN 1027  | ≥ 1050 Pa                                  | -                 |
| Compatibility with other building materials  | DIN 18542  | compliant with class BG 1                  |                   |
| Resistance to UV and weathering              | DIN 18542  | compliant with class BG 1                  | -                 |
| Reaction to fire class                       | DIN 4102-1                                       | class B1                                   | -                 |
| Acoustic insulation of joints $R_{S,w}(ift)$ | EN ISO 10140-1<br>EN ISO 10140-2<br>EN ISO 717-1 | 18 mm: ≥ 63 (-2;-5) dB                     | -                 |
| Temperature resistance                       |  | -30 / +80 °C                               | -22 / +176 °F     |
| Application temperature                      |  | ≥ +5 °C                                    | ≥ +41 °F          |
| Storage temperature <sup>(1)</sup>           |  | +5 / +20 °C                                | +41 / +68 °F      |
| Emicode                                      | GEV test procedure                               | EC1 plus                                   | -                 |

<sup>&</sup>lt;sup>(1)</sup>Store the product in a cool, dry place for no more than 12 months. Waste classification (2014/955/EU): 17 02 03.

### ■ CODES AND DIMENSIONS

| CODE      | В    |    | S   | s <sub>max</sub> | L   | В    |    | S    | S <sub>max</sub> | L    |   |
|-----------|------|----|-----|------------------|-----|------|----|------|------------------|------|---|
|           | [mm] | [m | ım] | [mm]             | [m] | [in] | [n | nil] | [mil]            | [ft] |   |
| FRAME2054 | 54   | 2  | 12  | 20               | 30  | 2.1  | 79 | 472  | 787              | 98   | 7 |
| FRAME2074 | 74   | 2  | 12  | 20               | 30  | 2.9  | 79 | 472  | 787              | 98   | 5 |



### PROFESSIONAL INSTALLATION

Conforms with EnEV and RAL requirements, and guarantees a high level of thermal and acoustic insulation.

### **VERSATILE**

It effectively seals any type of crack between 2 and 10 mm, resisting heavy rain.

## FASTENING FOR WINDOWS AND DOORS: SAFETY AND RELIABILITY



Discover the wide range of fastening systems specifically designed for window/door installation, such as SHS small head screws also available in stainless steel versions, MBS screws for direct fixing to masonry and WKR reinforced angle brackets. It ensures the appropriate fastening to your windows and doors.

Scan the QR code and find out the characteristics of the MBS and SHS screws in the "Screws and connectors for timber" catalogue







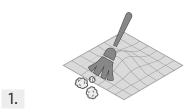
### **SEAL WITH FOAM**

Polyurethane foam is a chemical sealant. Its main functions are to waterproof, insulate and seal. It is commonly used in installation of windows and doors, to fill in cracks or air voids in construction, or to attach different elements to avoid infiltration and passage of air.

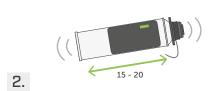
### RECOMMENDATIONS WHEN SEALING WITH FOAM

The biggest advantage offered by foam is its ability to penetrate inside the opening, ceiling, hollow space, or hole, and in general in all situations in which a sheet of material cannot be used.

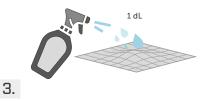
Note It is always advisable to have the correct Personal Protective Equipment (PPE) and to consult the technical data sheet and safety data sheet before starting the application.



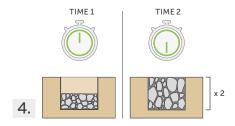
The substrates must be resistant, clean, free of oil and grease, dust and dirt in general. Foam expands; fasten the support materials to prevent deformation and movement.



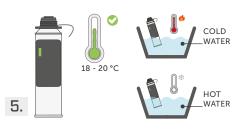
Shake the can energetically at least 15-20 times before using, keeping it horizontal and repeating this operation after the processing intervals, if any.



To be able to form a uniform cell structure, it is important to moisten the surfaces. When more than one layer of foam is required, spray the surface of each layer before proceeding with the next one. We recommend about 1 dl of water each can.



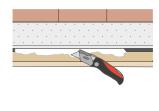
Caution: do not fill the entire cavity because foam is self-expanding and increases its volume before it fully hardens. So, considering post expansion, apply only the necessary amount.



For optimal performance work at an ambient temperature of approximately +20°. Tip: Immerse the can in warm or cool water to raise or lower the temperature of the mix.



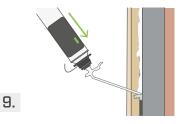
Before inserting the can in the gun (CODE FLYFOAM), check that there is no foam residue from the last use. The guns are equipped with a specific valve that regulates the extrusion pressure, to dose the foam precisely.



Any surplus hardened foam can be cut off with a cutter or sanded down with sandpaper. All our foams can be cut.



After use, carefully eliminate all foam residue from the gun. If it hardens inside, it could become unusable. The cleaner (CODE FLYCLEAN) is effective until the foam has hardened, after which the residues can only be removed mechanically.



In addition to the traditional foams to be used with a foam gun, a manual foam (COD. EASYFOAMMAN) that requires no professional equipment for application and can be applied using the nozzle provided is also available.

7.

### **EASY FOAM**







### GENERAL PURPOSE FOAM SEALANT

#### **VERY LOW EMISSIONS**

Compatibility for indoor use tested and certified by EC1 plus.

#### **CONTROLLED EXPANSION**

The special formula limits the foam post expansion, so that it does not create excessive pressure on the glued elements.



### ■ TECHNICAL DATA

| Properties                                    | standard           | value                 | USC conversion           |
|---|--------------------|-----------------------|--------------------------|
| Film formation time 23 °C / 50% RH            | -                  | 9 - 13 min            | -                        |
| Cutting time 23 °C / 50% RH                   | -                  | 20 - 40 min           | -                        |
| Time required for complete hardening          | -                  | 60 min                | -                        |
| Thermal conductivity (λ)                      | EN 12667           | 0,030 - 0,035 W/(m·K) | 0.017 - 0.02 BTU/h·ft·°F |
| Reaction to fire                              | DIN 4102-1         | class B3              | -                        |
| Temperature resistance once hardened          | -                  | -40 / +90 °C          | -40 / +194 °F            |
| Application temperature (cartridge)           | -                  | +15 / +30 °C          | +59 / +86 °F             |
| Application temperature (ambient and support) | -                  | +5 / +35 °C           | +41 / +95 °F             |
| Emicode                                       | GEV test procedure | EC1 plus              | -                        |
| French VOC classification                     | ISO 16000          | A+                    | -                        |
| VOC content                                   | -                  | 19,4% / 191,2 g/L     | -                        |
| Transport temperature                         | -                  | 0 / +35 °C            | +32 / +95 °F             |
| Storage temperature <sup>(1)</sup>            | -                  | +15 / +25 °C          | +59 / +77 °F             |

<sup>(1)</sup> Store the product in a vertical position in a dry, covered location for no more than 18 months. Check the expiry date on the cartridge. Waste classification (2014/955/EU): 16 05 04

### CODES AND DIMENSIONS

| CODE          | content<br>[mL] | yield<br>[L] | content<br>[US fl oz] | <b>yield</b><br>[US gal] | cartridge | version |    |
|---------------|-----------------|--------------|-----------------------|--------------------------|-----------|---------|----|
| 1 EASYFOAM    | 750             | 40           | 25.36                 | 10.57                    | aluminium | gun     | 12 |
| 2 EASYFOAMMAN | 750             | 25           | 25.36                 | 6.60                     | aluminium | manual  | 12 |



### PRICE-QUALITY RATIO

It represents a good compromise between performance, elasticity and price, guaranteeing adhesion and tightness.

### COMPLETE RANGE

Available in manual or gun versions, both of which can be trimmed after drying.

Aerosol 1. Acute Tox. 4.Acute Tox. 4.Skin Irrit. 2. Eye Irrit. 2.Resp. Sens. 1. Skin Sens. 1. Carc. 2. STOT SE 3. STOT RE 2. Lact. Aquatic Acute 1. Aquatic Chronic 1.

### I HERMETIC FOAM









### **CERTIFIED NOISE REDUCTION**

Up to 63 dB noise reduction, certified by the IFT Rosenheim institution (ISO 10140-1).

### AIRTIGHT EVEN AFTER TRIMMING

Waterproof and airtight, even if trimmed after hardening, thanks to the closed-cell structure.



### ■ TECHNICAL DATA

| Properties   | standard                       | value                  | USC conversion           |
|--|--------------------------------|------------------------|--------------------------|
| Composition  | -                              | Single component PU    | -                        |
| Colour   | -                              | white                  | -                        |
| Film formation time 23 °C / 50% RH                           | -                              | 6 - 10 min             | -                        |
| Cutting time 23 °C / 50% RH                                  | -                              | 20 - 40 min            | -                        |
| Time required for complete hardening 23 °C / 50% RH          | -                              | 60 min                 | -                        |
| Thermal conductivity (λ)                                     | FEICA TM1020/<br>EN 12667      | 0,030 - 0,035 W/(m·K)  | 0.017 - 0.02 BTU/h·ft·°F |
|  | EN ISO 10140-1                 | 10 mm: ≥ 63 (-1;-5) dB | -                        |
| Acoustic insulation of joints R <sub>S,w</sub> (ift)         | EN ISO 10140-2<br>EN ISO 717-1 | 20 mm: ≥ 62 (-1;-5) dB | -                        |
| Water vapour resistance factor (µ)                           | EN 12086                       | 36                     | -                        |
| Reaction to fire   | DIN 4102-1                     | class B3               | -                        |
| Reaction to life   | EN 13501-1                     | class F                | -                        |
| Temperature resistance once hardened                         | -                              | -40 / +90 °C           | -40 / +194 °F            |
| Application temperature (cartridge, environment and support) | -                              | +5 / +35 °C            | +41 / +95 °F             |
| Emicode  | GEV test procedure             | EC1 plus               | -                        |
| French VOC classification                                    | ISO 16000                      | A+                     | -                        |
| VOC content  | -                              | 17,0 % - 173,3 g/L     | -                        |
| Transport temperature  | -                              | 0 / +35 °C             | +32 / +95 °F             |
| Storage temperature <sup>(1)</sup>                           | -                              | +15 / +25 °C           | +59 / +77 °F             |
| Storage time <sup>(2)</sup>                                  | -                              | 12 months              | -                        |

 $<sup>\</sup>ensuremath{^{(1)}}\mbox{Store}$  the product in a vertical position in a dry, covered location.

Waste classification (2014/955/EU): 16 05 04.

Aerosol 1. Acute Tox. 4.Acute Tox. 4.Skin Irrit. 2. Eye Irrit. 2.Resp. Sens. 1. Skin Sens. 1. Carc. 2. STOT SE 3. STOT RE 2

### ■ CODES AND DIMENSIONS

| CODE      | content<br>[mL] | yield<br>[L] | content<br>[US fl oz] | <b>yield</b><br>[US gal] | cartridge |    |
|-----------|-----------------|--------------|-----------------------|--------------------------|-----------|----|
| HERFOAM   | 750             | 40           | 25.36                 | 10.57                    | aluminium | 12 |
| CODE      | content<br>[mL] | yield<br>[L] | content<br>[US fl oz] | <b>yield</b><br>[US gal] | cartridge |    |
| HERFOAMB2 | 750             | 32           | 25.36                 | 8.45                     | aluminium | 12 |

<sup>(2)</sup> Check the expiry date on the cartridge.

### ■ TECHNICAL DATA

| Properties                           | standard   | value                   | USC conversion |
|--------------------------------------|------------|-------------------------|----------------|
| Composition                          | -          | Single component PU     | -              |
| Colour                               | -          | white                   | -              |
| Density                              |            | 15-20 kg/m <sup>3</sup> | -              |
| Film formation time 20°C / 65% RH    | -          | 6-8 min                 | -              |
| Cutting time 23 °C / 50% RH          | -          | 15-20 min               | -              |
| Reaction to fire                     | EN 13501-1 | class E                 | -              |
| Reaction to life                     | DIN 4102-1 | class B2                | -              |
| Temperature resistance once hardened | -          | -40 / +80 °C            | -40 / +176 °F  |
| Application temperature (cartridge)  | -          | +5 / +35 °C             | +41 / +95 °F   |
| Application temperature (ambient)    | -          | +5 / +35 °C             | +41 / +95 °F   |
| Application temperature (support)    | -          | +5 / +35 °C             | +41 / +95 °F   |
| Storage temperature <sup>(1)</sup>   | -          | +15 / +25 °C            | +59 / +77 °F   |
| Storage time <sup>(2)</sup>          | -          | 12 months               | -              |

 $<sup>^{(1)}</sup>$ Store the product in a vertical position in a dry, covered location.

### ■ FIELDS OF APPLICATION





### ■ RELATED PRODUCTS



FLY FOAM page 333



FOAM CLEANER page 333



CUTTER page 328



### **EMICODE EC1 PLUS**

Its low VOC content and very low emissions also make this foam perfect for indoor use.

### HIGH ELASTICITY

Thanks to its the composition, it remains elastic and deformable over time, compensating for the movements of the wood and differential deformation of the building materials.

<sup>(2)</sup> Check the expiry date on the cartridge.

Waste classification (2014/955/EU): 16 05 04.

### I FIRE FOAM





### EI 240 B-s1,d0



### FIRE RESISTANCE EI 240

Tested in the event of fire to provide protection against combustion fumes and heat for up to 240 minutes.

HIGH FIRE-RESISTANT SEALING FOAM

#### **ETA CERTIFICATE**

The only ETA tested and certified foam for fire protection and sealing of linear joints and cracks.

### ■ TECHNICAL DATA

| Properties  | standard     | value               | USC conversion   |
|---|--------------|---------------------|------------------|
| Composition   | -            | Single component PU | -                |
| Colour  | -            | pink                | -                |
| Post expansion                                      | -            | 90 - 120 %          | -                |
| Film formation time 20 °C / 65% RH                  | FEICA TM1014 | ≤ 10 min            | -                |
| Cutting time 23 °C / 50% RH                         | -            | ≤ 40 min            | -                |
| Time required for complete hardening 23 °C / 50% RH | -            | 24 h                | -                |
| Thermal conductivity (λ)                            | -            | 0,036 W/(m·K)       | 0.02 BTU/h·ft·°F |
| Dimensional stability                               | -            | ≤ 3 %               | -                |
| Described to fire                                   | DIN 4102-1   | class B1            | -                |
| Reaction to fire                                    | EN 13501-1   | class B-s1,d0       | -                |
| Fire resistance rating <sup>(1)</sup>               | EN 13501-2   | EI240               | -                |
| Temperature resistance once hardened                | -            | -30 / +80 °C        | +50 / +176 °F    |
| Application temperature (ambient)                   | -            | +10 / +30 °C        | +50 / +86 °F     |
| Application temperature (support)                   | -            | +10 / +30 °C        | +50 / +86 °F     |
| Application temperature (cartridge)                 | -            | +10 / +30 °C        | +50 / +86 °F     |
| French VOC classification                           | -            | A+                  | -                |
| VOC content   |              | 0,12% - 158 g/L     | -                |
| Transport temperature                               | -            | -20 °C / +30 °C     | -4/+86°F         |
| Storage temperature <sup>(2)</sup>                  | -            | +5 °C / +30 °C      | +41 / +86 °F     |
| Storage time <sup>(3)</sup>                         | -            | up to 18 months     | -                |

<sup>&</sup>lt;sup>(1)</sup>For 10 mm and 20 mm wide joints.

Waste classification (2014/955/EU): 16 05 04.
Aerosol 1. Resp. Sens. 1. Carc. 2. STOT RE 2. Acute Tox. 4. Skin Irrit. 2. Eye Irrit. 2. Skin Sens. 1. STOT SE 3

### CODES AND DIMENSIONS

| CODE     | content | yield | content    | yield    | cartridge |    |
|----------|---------|-------|------------|----------|-----------|----|
|          | [mL]    | [L]   | [US fl oz] | [US gal] |           |    |
| FIREFOAM | 750     | 42    | 25.36      | 11.1     | aluminium | 12 |

 $<sup>\</sup>ensuremath{^{(2)}}\mbox{Store}$  the product in a vertical position in a dry, covered location.

<sup>(3)</sup> Check the expiry date on the cartridge.

### ■ FIELDS OF APPLICATION





### ■ RELATED PRODUCTS



FLY FOAM page 333



FOAM CLEANER page 333



FIRE SEALING page 122 -124



### MAXIMUM PERFORMANCE

Its uniform cell structure, dimensional stability and mechanical properties make it the ideal product for insulating, sealing and filling in all cases where high fire protection requirements are required.

### **IMS SEAL**





### MS POLYMER HIGH ELASTICITY SEALANT

#### IT CAN BE PAINTED

It can be overpainted with water-based paints commonly used in construction.

#### **SECURE**

MS POLYMER, pure, single-component, with no shrinkage. It offers an alternative to ensure airtightness in the case of visible sealing.



### ■ TECHNICAL DATA

| Properties                                | standard    | value                       | USC conversion          |
|---|-------------|-----------------------------|-------------------------|
| Classification                            | EN 15651-1  | F-EXT/INT-CC <sup>(1)</sup> | -                       |
| Specific weight                           | -           | 1,5 kg/dm <sup>3</sup>      | 0.87 oz/in <sup>3</sup> |
| Surface cross-linking time 20 °C / 50% RH | -           | approx. 20 min              | -                       |
| Hardening speed 20 °C / 50 %RH            | -           | 2,5 mm/24 h                 | 0.1 in/24 h             |
| Shore A hardness                          | DIN 53505   | 25                          | -                       |
| Elongation at failure                     | ISO 8339    | 400%                        | -                       |
| Elastic return                            | ISO 7389    | > 70%                       | -                       |
| Application temperature                   | -           | +5 / +35 °C                 | +41 / +95 °F            |
| French VOC classification                 | ISO 16000   | A+                          | -                       |
| VOC content                               | ISO 11890-2 | 9,2 g/L                     | -                       |
| Storage temperature <sup>(2)</sup>        | -           | +5 / +25 °C                 | +41 / +77 °F            |

<sup>(1)</sup> Non-structural sealant for façade elements, for external and internal use, also in areas with cold climates. (2) Store the product in a dry and covered place (12 months rigid cartridge/18 months soft cartridge). Check the expiry date on the packaging. Waste classification (2014/955/EU): 08 04 10.

EUH210 Safety data sheet available on request. EUH208 Contains CAS 1760-24-3. May produce an allergic reaction.

#### CODES AND DIMENSIONS

| CODE         | content | content    | version         |    |
|--------------|---------|------------|-----------------|----|
|              | [mL]    | [US fl oz] |                 |    |
| MSSEALWHI300 | 300     | 10.14      | rigid cartridge | 24 |
| MSSEALGRE300 | 300     | 10.14      | rigid cartridge | 24 |
| MSSEALWHI600 | 600     | 20.29      | soft cartridge  | 12 |
| MSSEALGRE600 | 600     | 20.29      | soft cartridge  | 12 |



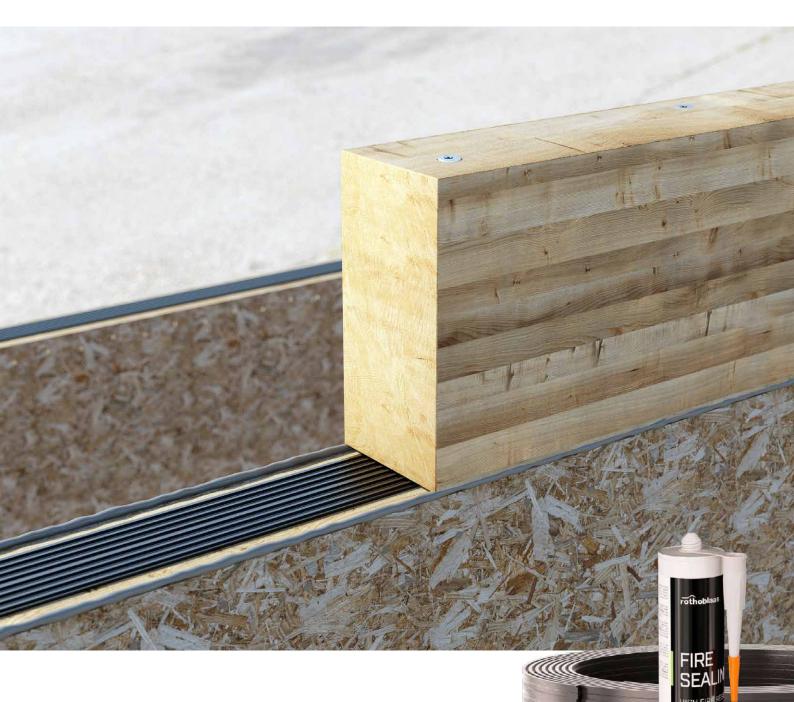
### **PERFORMANCE**

Excellent resistance to ageing and UV rays. Classified as a non-structural sealant for façade elements, for outdoor and indoor use, also in areas with cold climates (type F-EXT-INT-CC) according to EN 15651-1.

### **UNIVERSAL**

Universal one-component sealant ideal for glueing and sealing the most common building materials.

# IT INCREASES ALADIN STRIPE FIRE RESISTANCE



ALADIN STRIPE is the resilient profile for sound insulation of timber structures and houses. Thanks to the innovative compound in extruded and expanded EPDM to optimise noise reduction based on typical timber structure loads, it ensures absorption up to 4 dB in accordance with the standard EN ISO 140-7. Safety is always a priority: thanks to our wide range of fire-certified profiles, sealants, foams and tapes, you can always be sure of the safety of our solutions.

Scan the QR code and discover the technical features of ALADIN STRIPE







### I FIRE SEALING ACRYLIC











### HIGH FIRE-RESISTANT ACRYLIC SEALANT

#### IT CAN BE PAINTED

The sealant can be overpainted with the most common water-based paints and varnishes.

### **FIRE SAFETY**

It can be used in applications subject to fire protection regulations up to EI 240.



### ■ TECHNICAL DATA

| Properties   | standard           | value   | USC conversion |
|--|--------------------|---|----------------|
| Composition  | -                  | based on acrylic<br>polymers in water<br>dispersion | -              |
| Classification   | EN 15651-1         | F-INT <sup>(1)</sup>                                | -              |
| Density  | UNI 8490/2         | 1,70 g/mL   | 272.61 oz/gal  |
| Yield for 10x10 mm joint   | -                  | 5,5 m   | 18.04 ft       |
| Surface cross-linking time 23 °C   | -                  | approx. 30 min                                      | -              |
| Time required for complete hardening 23 $^{\circ}\text{C}$ / 50 $^{\circ}\text{R}$ | -                  | approx.10 days                                      | -              |
| Shore A hardness   | EN ISO 868         | 10 approx.  | -              |
| Elongation at failure  | DIN 53504          | 700%  | -              |
| Reaction to fire   | EN 13501-1         | class B-s1,d0                                       | -              |
| Fire resistance rating   | EN 13501-2         | EI240 <sup>(2)</sup>                                | -              |
| Emicode  | GEV test procedure | EC1 plus  | -              |
| French VOC classification  | ISO 16000          | A+  | -              |
| VOC content  | -                  | 1,6% / 27 g/L                                       | -              |
| Storage temperature <sup>(3)</sup>   | -                  | +5 / +35 °C   | +41 / +95 °F   |
| Expiry <sup>(3)</sup>  | -                  | up to 24 months                                     | -              |

 $<sup>^{(1)}</sup>$ Non-structural sealant for façade elements, for indoor use.

Waste classification (2014/955/EU): 08 04 10.

EUH210 Safety data sheet available on request. EUH208 Contains CAS 55965-84-9 (3:1), CAS 2634-33-5. May produce an allergic reaction.

### CODES AND DIMENSIONS

| CODE       | content | content    | colour | version        |    |
|------------|---------|------------|--------|----------------|----|
|            | [mL]    | [US fl oz] |        |                |    |
| FIREACR550 | 550     | 18.60      | white  | soft cartridge | 20 |

<sup>(2)</sup> Valid for tested configurations.

 $<sup>^{(3)}</sup>$ Store the product in a dry place and check the expiry date on the cartridge.

### ■ FIELDS OF APPLICATION







### ■ RELATED PRODUCTS



FLY SOFT page 332



FIRE FOAM page 118



BRUSH page 327



### **VERSATILE**

Good workability, it also adheres to moist supports, does not drip and is easily smoothed.

### **EMICODE EC1 PLUS**

Certified by GEV in terms of very low emissions of Volatile Organic Compounds.

### I FIRE SEALING SILICONE











### HIGH FIRE-RESISTANT SILICONE SEALANT

#### **SAFETY**

For sealing linear joints in fire rated walls and doors, in situations subject to fire regulations.

### FIRE RESISTANCE EI 240 AND CLASS B-s1,d0

Tested protection, designed to offer maximum protection against the passage of flames, smoke or gases.



### ■ TECHNICAL DATA

| Properties                       | standard           | value                       | USC conversion            |
|----------------------------------|--------------------|-----------------------------|---------------------------|
| Composition                      | -                  | silicone                    | -                         |
| Classification                   | EN 15651-1         | F-EXT/INT-CC <sup>(1)</sup> | -                         |
| Density                          | ISO 1183-1         | 1,482 g/mL                  | 237.65 oz/gal             |
| Yield for 10x10 mm joint         | -                  | 3,1 m                       | 10.7 ft                   |
| Surface cross-linking time 23 °C | -                  | approx. 80 min              | -                         |
| Hardening speed 23 °C            | -                  | approx. 2 mm in 24 h        | -                         |
| Shore A hardness                 | DIN 53505          | approx. 30                  | -                         |
| Elongation at failure            | DIN 53504          | 460%                        | -                         |
| Tensile strength                 | DIN 53504          | 0,72 N/mm <sup>2</sup>      | 104.43 lbf/in²            |
| Elastic modulus 100%             | DIN 53504          | 0,38 N/mm <sup>2</sup>      | 55.11 lbf/in <sup>2</sup> |
| Reaction to fire                 | EN 13501-1         | class B-s1,d0               | -                         |
| Fire resistance rating           | EN 13501-2         | EI 240 <sup>(2)</sup>       | -                         |
| Acid resistance                  | -                  | excellent                   | -                         |
| Bases resistance                 | -                  | excellent                   | -                         |
| Emicode                          | GEV test procedure | EC1                         | -                         |
| French VOC classification        | ISO 16000          | A+                          | -                         |
| VOC content                      | -                  | 4,3% / 64 g/L               | -                         |
| Expiry <sup>(3)</sup>            | -                  | up to 12 months             | -                         |

<sup>(1)</sup> Non-structural sealant for façade elements, for external and internal use, also in areas with cold climates.

Waste classification (2014/955/EU): 08 04 09

Eye Dam. 1 . Skin Sens. 1B.

### CODES AND DIMENSIONS

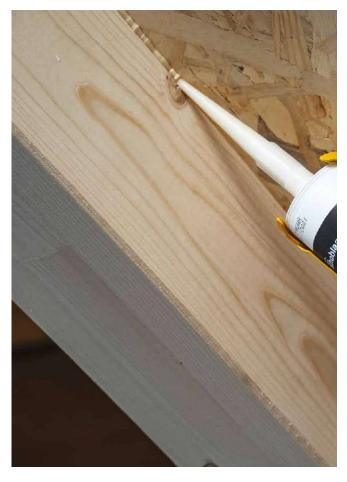
| CODE          | content<br>[mL] | content<br>[US fl oz] | colour | version            |    |
|---------------|-----------------|-----------------------|--------|--------------------|----|
| FIRESILGRE310 | 310             | 10.48                 | grey   | rigid<br>cartridge | 24 |
| FIRESILIVO310 | 310             | 10.48                 | ivory  | rigid<br>cartridge | 24 |

<sup>(2)</sup> Valid for tested configurations.

 $<sup>\</sup>ensuremath{^{(3)}}\mbox{Store}$  the product in a dry place and check the expiry date on the cartridge.

### ■ FIELDS OF APPLICATION

**IVORY** 



### **GREY**





### RELATED PRODUCTS



FLY page 332



FIRE FOAM page 118



page 130

### FAÇADE AND EXTREME CLIMATES

Classified, according to EN 15651-1, for indoor and outdoor non-structural uses, it can also be used on façades and in areas with cold climates. High adhesion and high UV resistance.



### **SAFETY**

For sealing linear joints in fire rated walls and doors, in situations subject to fire regulations.

### I NAIL PLASTER | GEMINI

### HIGH-ADHESION NAIL POINT SEALANT TAPE

### **HERMETIC**

The closed cell polyethylene structure ensures the opening created by the fastening systems is waterproof.

### **WIDE RANGE**

Also available in 5 mm thickness, 70 mm width and double-sided adhesive for more secure sealing.

### COMPOSITION

### NAIL PLASTER

carrier

PE foam

adhesive

synthetic rubber

#### GEMINI

adhesive

synthetic rubber

carrier

PE foam

adhesive

synthetic rubber

silicone-impregnated film

### CODES AND DIMENSIONS

### NAIL PLASTER

| CODE       | В    | S    | L   | В    | S     | L    |    |
|------------|------|------|-----|------|-------|------|----|
|            | [mm] | [mm] | [m] | [in] | [mil] | [ft] |    |
| NAILPLA350 | 50   | 3    | 30  | 2.0  | 118   | 98   | 10 |
| NAILPLA370 | 70   | 3    | 30  | 2.8  | 118   | 98   | 7  |
| NAILPLA550 | 50   | 5    | 10  | 2.0  | 197   | 33   | 6  |

| CODE         | В    | Н    | s    | В    | Н    | S     | pcs/roll |   |
|--------------|------|------|------|------|------|-------|----------|---|
|              | [mm] | [mm] | [mm] | [in] | [in] | [mil] |          |   |
| NAILPLA35050 | 50   | 50   | 3    | 2.0  | 2.0  | 118   | 400      | 6 |

#### **GEMINI**

| CODE     | В    | s    | L   | В    | S     | L    |   |
|----------|------|------|-----|------|-------|------|---|
|          | [mm] | [mm] | [m] | [in] | [mil] | [ft] |   |
| GEMINI60 | 60   | 3    | 30  | 2.4  | 118   | 98   | 8 |
| GEMINI80 | 80   | 3    | 30  | 3.2  | 118   | 98   | 6 |

### ■ TECHNICAL DATA

| Properties                         | standard | value            | USC conversion |
|------------------------------------|----------|------------------|----------------|
| Tensile strength                   | EN 1939  | material failure |                |
| Temperature resistance             | -        | -30 / +80 °C     | -22 / +176 °F  |
| Application temperature            | -        | ≥ +5 °C          | ≥ +41 °F       |
| Storage temperature <sup>(1)</sup> | -        | +5 / +25 °C      | +41 / +77 °F   |
| Solvents                           | -        | no               | -              |

 $<sup>^{(1)}</sup> Store$  the product in a cool, dry place for no more than 12 months. Waste classification (2014/955/EU): 08 04 10.

### ■ FIELDS OF APPLICATION











### **PRACTICAL**

With the help of LIZARD, installation is easy and fast, done directly on the ventilation battens.

### **DOUBLE SECURITY**

The GEMINI version offers double adhesiveness and guarantees continuous adhesion between the membrane and batten, avoiding water accumulation in drilled points.

### NAIL BAND

### BUTYL NAIL POINT SEALANT TAPE



Thanks to its modified butyl formulation, it ensures excellent durability even when subjected to thermal stress. Also suitable for installation at low temperatures.

### **LOW TEMPERATURES**

The butyl ensures excellent adhesion to supports under difficult environmental conditions.



### ■ TECHNICAL DATA

| Properties                         | standard   | value        | USC conversion |
|------------------------------------|------------|--------------|----------------|
| Tensile strength                   | EN 14410   | 25 N/25 mm   | 5.71 lbf/in    |
| Elongation at failure              | EN 14410   | > 300%       | -              |
| 90° adhesion force                 | -          | ≥ 15 N/25 mm | ≥ 3.43 lbf/in  |
| Reaction to fire                   | EN 13501-1 | class E      | -              |
| Temperature resistance             | -          | -30 / +80 °C | -22 / +176 °F  |
| Application temperature            | -          | +5 / +40 °C  | +41 / +104 °F  |
| Storage temperature <sup>(1)</sup> | -          | +5 / +25 °C  | +41 / +77 °F   |
| Solvents                           | -          | no           | -              |

<sup>(1)</sup> Store the product in a dry, covered location. Waste classification (2014/955/EU): 08 04 10.

### CODES AND DIMENSIONS

| CODE       | В    | s    | L   | В    | S     | L    |    |
|------------|------|------|-----|------|-------|------|----|
|            | [mm] | [mm] | [m] | [in] | [mil] | [ft] |    |
| NAILBAND50 | 50   | 1    | 15  | 2.0  | 39    | 49   | 12 |



### **SELF-SEALING**

Due to its elasticity, butyl tends to seal around the screw or nail used to fix the battens or elements on which it is installed.

### **DURABILITY**

The butyl compound ensures excellent durability even under thermal stress, while maintaining elasticity and impermeability over time.

### **BUTYL BAND**







### DOUBLE-SIDED UNIVERSAL BUTYL TAPE

### **STRONG**

The polyester grid guarantees consistence and high resistance.

#### **HERMETIC**

Appropriate for watertight seals for timber-to-timber and/or timber-to-concrete joints.

### ■ TECHNICAL DATA

| Properties                         | standard    | value                | USC conversion    |
|------------------------------------|-------------|----------------------|-------------------|
| Maximum tensile force MD/CD        | EN 12311-1  | 115 / 140 N/50 mm    | 13.13 / 16 lbf/in |
| Elongation at break point MD/CD    | EN 12311-1  | 15 / 15%             | -                 |
| Adhesion on steel at 180°          | ASTM D 1000 | 35 N/cm              | 20 lbf/in         |
| Initial Tack                       | ASTM D 2979 | 10 N                 | 2.25 lbf          |
| Reaction to fire                   | EN 13501-1  | class E              | -                 |
| Temperature resistance             | -           | -30 / +130 °C        | -22 / +266 °F     |
| Application temperature            | -           | +5 / +40 °C          | +41 / +104 °F     |
| Storage temperature <sup>(1)</sup> | -           | +5 / +40 °C          | +41 / +104 °F     |
| Solvents                           | -           | no                   | -                 |
| VOC emissions                      | ISO 16000   | 30 μg/m <sup>3</sup> | -                 |
| French VOC classification          | ISO 16000   | A+                   | -                 |

<sup>(1)</sup> Store the product in a cool, dry place for no more than 12 months. Waste classification (2014/955/EU): 08 04 10.

### **CODES AND DIMENSIONS**

| CODE          | В    | s    | L   | В    | S     | L    |    |
|---------------|------|------|-----|------|-------|------|----|
|               | [mm] | [mm] | [m] | [in] | [mil] | [ft] |    |
| BUTYLBAND1501 | 15   | 1    | 15  | 0.6  | 39    | 49   | 20 |
| BUTYLBAND1502 | 15   | 2    | 10  | 0.6  | 79    | 33   | 13 |



### SPECIAL BUTYL MIX

Thanks to its special modified butyl formulation, it ensures excellent durability even when subjected to thermal stress and UV radiation.

### **ADJUSTABLE**

Butyl is also perfectly suited for installation in tight spaces and on irregular profiles without resistance.

### I FIRE STRIPE

### INTUMESCENT THERMO-INFLATABLE **FLEXIBLE GASKET**

### **INTUMESCENT**

It expands under the effect of strong heat. As it expands, it seals the cavity in which it is placed, blocking the passage of flames.

### FIRE PROTECTION

Installable in tight spaces, it is perfect for the fire protection of our concealed fastening systems.



### ■ TECHNICAL DATA

| Properties                | standard   | value              | USC conversion |
|---------------------------|------------|--------------------|----------------|
| Colour                    | -          | grey               | -              |
| Reaction to fire          | NF P92-501 | M1 - non-flammable | -              |
| Application temperature   | -          | +5 / +35 °C        | +41 / +95 °F   |
| Storage temperature       | -          | +1 / +25 °C        | +33.8 / +77 °F |
| French VOC classification | ISO 16000  | A+                 | -              |

 $<sup>^{(1)}</sup>$ Store the product in a cool, dry place for no more than 12 months. Waste classification (2014/955/EU): 08 04 10.

### CODES AND DIMENSIONS

| CODE         | В    | s    | L   | В    | S     | L    |    |
|--------------|------|------|-----|------|-------|------|----|
|              | [mm] | [mm] | [m] | [in] | [mil] | [ft] |    |
| FIRESTRIPE10 | 10   | 2    | 6   | 0.4  | 79    | 20   | 56 |



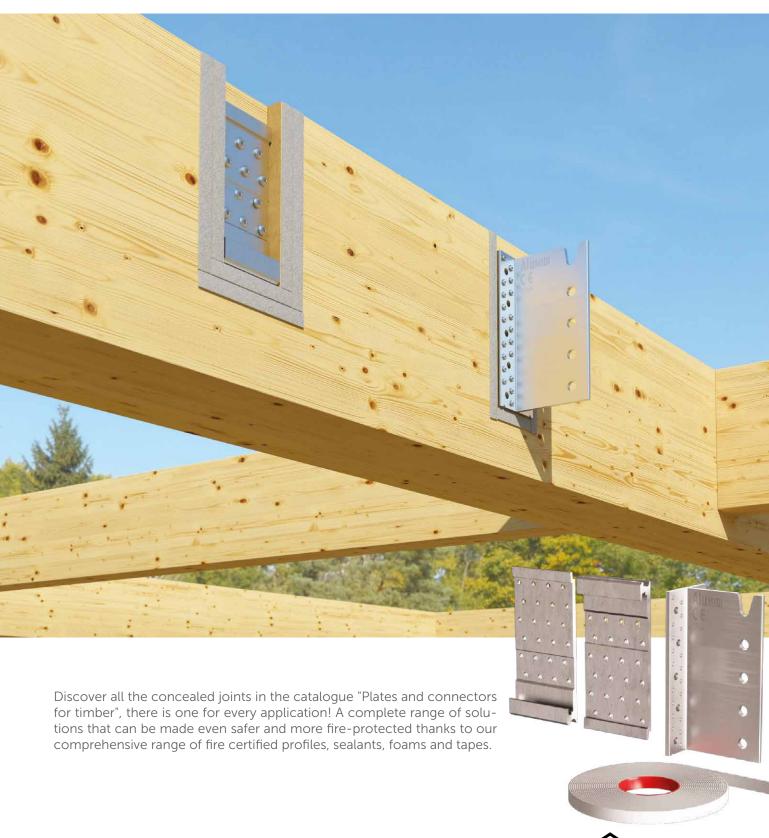
### **DURABILITY**

The profile has good resistance to UV and thermal stress and is not subject to rotting.

### **FAST INSTALLATION**

The tape is adhesive, is installed quickly and no support tools are required.

# CONCEALED JOINTS AND FIRE SAFETY



Scan the QR code and download our "Plates and connectors for timber" catalogue.







### I SUPRA BAND



### UNIVERSAL DOUBLE-SIDED BUTYL TAPE WITH **HIGH ADHESIVENESS**



### **PEERLESS**

Water and air resistant, it guarantees adhesion even to wet supports and at low temperatures.

### **ELASTIC**

Also suitable for sealing wood-wood joints (it compensates for the natural movements of the material).

### COMPOSITION

release liner

silicone coated paper

double-sided grey butyl compound



### ■ TECHNICAL DATA

| Properties                         | standard    | value                | USC conversion |
|------------------------------------|-------------|----------------------|----------------|
| Ageing resistance                  | -           | long duration        | -              |
| Initial Tack                       | ASTM D 2979 | 6 N                  | 1.35 lbf       |
| Adhesion on steel at 180°          | ASTM D 1000 | 16 N/cm              | 9.14 lbf/in    |
| Adhesiveness on concrete 180°      | -           | 32 N/cm              | 18.27 lbf/in   |
| Vertical sliding                   | ISO 7390    | absent               | -              |
| Temperature resistance             | -           | -30 / +90 °C         | -22 / 194 °F   |
| Application temperature            | -           | -5 / +40 °C          | +23 / 104 °F   |
| Storage temperature <sup>(1)</sup> | -           | +5 / +40 °C          | +41 / 104 °F   |
| Solvents                           | -           | no                   | -              |
| VOC emissions                      | ISO 16000   | 30 μg/m <sup>3</sup> | -              |
| French VOC classification          | ISO 16000   | A+                   | -              |

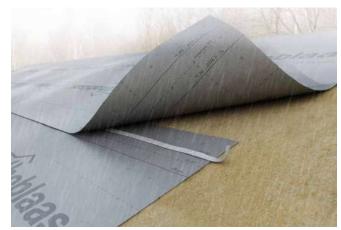
 $<sup>^{(1)}</sup>$ Store the product in a cool, dry place for no more than 12 months. Waste classification (2014/955/EU): 08 04 10.

### ■ CODES AND DIMENSIONS

| CODE    | В    | s    | L   | В    | S     | L    |    |
|---------|------|------|-----|------|-------|------|----|
|         | [mm] | [mm] | [m] | [in] | [mil] | [ft] |    |
| SUPRA6  | 6    | 4    | 6   | 0.2  | 160   | 20   | 16 |
| SUPRA10 | 10   | 4    | 6   | 0.4  | 160   | 20   | 22 |

### ■ FIELDS OF APPLICATION









### ■ RELATED PRODUCTS



DOUBLE BAND page 62



OUTSIDE GLUE page 154



SUPERB GLUE page 150



### SPECIAL BUTYL MIX

The modified butyl formulation of the product allows instant and permanent adhesion to all building materials. In addition, the material is impermeable to water and steam, ensuring a perfect seal.

### **FAST INSTALLATION**

Its adhesive power also allows the sealing of damp or porous surfaces without the need to apply additional products, saving time and money.

### I ALU BUTYL BAND



### REFLECTING BUTYL ADHESIVE TAPE



#### BUTYL

The butyl composition offers excellent adhesiveness on the most common surfaces, even very porous ones.

### **UV-STABLE**

The reinforced aluminium coating protects the butyl mixture, guaranteeing that the seal lasts.

### COMPOSITION

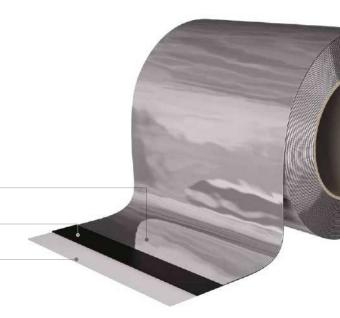
support

reinforced aluminium film

grey adhesive butyl compound

release liner

PE film



### **TECHNICAL DATA**

| Properties                         | standard    | value                | USC conversion       |
|------------------------------------|-------------|----------------------|----------------------|
| Initial Tack                       | ASTM D 2979 | 8 N                  | 1.8 lbf              |
| Adhesion on steel at 180°          | ASTM D 1000 | 20 N/cm              | 11.42 lbf/in         |
| Vertical sliding                   | ISO 7390    | 0 mm                 | -                    |
| Maximum tensile force MD/CD        | EN 12311-1  | 185 / 200 N/50 mm    | 21.13 / 22.84 lbf/in |
| Elongation at break point MD/CD    | EN 12311-1  | 10 / 20 %            | -                    |
| Water vapour resistance factor (µ) | UNI EN 1931 | 2720000              | 13600 MN·s/g         |
| Reaction to fire                   | EN 13501-1  | class E              | -                    |
| Temperature resistance             | -           | -30 / +90 °C         | -22 / 194 °F         |
| Application temperature            | -           | 0 / +40 °C           | +32 / 104 °F         |
| Watertightness                     | -           | conforming           | -                    |
| UV-resistant                       | -           | permanent            | -                    |
| Storage temperature <sup>(1)</sup> | -           | +5 / +40 °C          | +41 / 104 °F         |
| Solvents                           | -           | no                   | -                    |
| VOC emissions                      | ISO 16000   | 30 μg/m <sup>3</sup> | -                    |
| French VOC classification          | ISO 16000   | A+                   | -                    |

<sup>&</sup>lt;sup>(1)</sup>Store the product in a cool, dry place for no more than 12 months.

Waste classification (2014/955/EU): 08 04 99.

### ■ CODES AND DIMENSIONS

| CODE        | В    | s    | L   | В    | S     | L    |   |
|-------------|------|------|-----|------|-------|------|---|
|             | [mm] | [mm] | [m] | [in] | [mil] | [ft] |   |
| ALUBUTYL75  | 75   | 1    | 10  | 3.0  | 39    | 33   | 8 |
| ALUBUTYL150 | 150  | 1    | 10  | 5.9  | 39    | 33   | 4 |

### ■ FIELDS OF APPLICATION









### ■ RELATED PRODUCTS



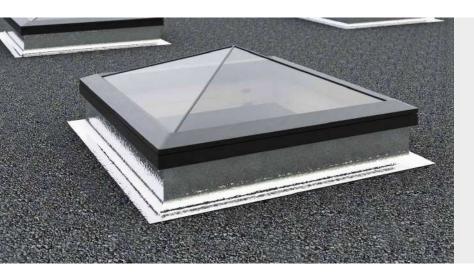
ALU BAND page 61



BYTUM SPRAY page 46



BYTUM LIQUID page 48



### **STRONG**

Thanks to the reinforced aluminium film, it has outstanding mechanical properties and is tear-resistant.

### **VERSATILE**

Widely used in building roofing, repair of surface cracks, repair of motor homes, windows, boat seals, glazing and roofing.

### **BLACK BAND**



### UNIVERSAL SINGLE-SIDED BUTYL TAPE



#### **EXTRAORDINARY**

Universal and expandable up to 300%, it effectively seals any crack on the most widely used construction materials.

### **PRACTICAL**

Ideal for easy sealing on difficult nodes and very irregular surfaces; self-sealing even at low temperatures.

### COMPOSITION

support

high density PE film

black adhesive butyl compound

release liner

easy-release PP film

### **■ TECHNICAL DATA**

| Properties                         | standard    | value                | USC conversion   |
|------------------------------------|-------------|----------------------|------------------|
| Initial Tack                       | ASTM D 2979 | 8 N                  | 1.8 lbf          |
| Adhesion on steel at 180°          | ASTM D 1000 | 20 N/cm              | 11.42 lbf/in     |
| Maximum tensile force MD/CD        | EN 12311-1  | 20/10 N/50 mm        | 2.28/1.14 lbf/in |
| Elongation at break point MD/CD    | EN 12311-1  | 250/300 %            | -                |
| Temperature resistance             | -           | -30 /+90 °C          | -22 / 194 °F     |
| Application temperature            | -           | 0 / +40 °C           | +32 / 104 °F     |
| Watertightness                     | -           | conforming           | -                |
| Storage temperature <sup>(1)</sup> | -           | +5 / +40 °C          | +41 / 104 °F     |
| Solvents                           | -           | no                   | -                |
| VOC emissions                      | ISO 16000   | 30 μg/m <sup>3</sup> | -                |
| French VOC classification          | ISO 16000   | A+                   | -                |

 $<sup>^{(1)}</sup>$ Store the product in a cool, dry place for no more than 12 months. Waste classification (2014/955/EU): 08 04 10.

### ■ CODES AND DIMENSIONS

| CODE      | liner   | В    | s    | L   | liner     | В    | S     | L    |   |
|-----------|---------|------|------|-----|-----------|------|-------|------|---|
|           | [mm]    | [mm] | [mm] | [m] | [in]      | [in] | [mil] | [ft] |   |
| BLACK50   | 50      | 50   | 2    | 10  | 2.0       | 2.0  | 79    | 33   | 6 |
| BLACK4040 | 40 / 40 | 80   | 2    | 10  | 1.6 / 1.6 | 3.2  | 79    | 33   | 4 |

### ■ RECOMMENDATIONS FOR INSTALLATION

SEALING OF TECHNICAL INSTALLATIONS AND PASSAGES









SEALING OF JOINT IN THE GROUND CONNECTION NODE







### FINGERLIFT AND PRE-CUT LINER

Thanks to the easy-release film, installation is quick. The 80 mm version has a pre-cut liner to facilitate installation in corners or complex locations.

### SPECIAL BUTYL MIX

The product's modified butyl formulation ensures excellent durability even under thermal stress making it suitable for installation even at low temperatures.

### **I MANICA PLASTER**



### ADHESIVE SEALING SLEEVE THAT CAN BE **PLASTERED**



### **CAN BE PLASTERED**

The butyl compound is covered with a polypropylene fabric that can be plastered.

### SPECIAL BUTYL MIX

Thanks to its special modified butyl formulation, it ensures excellent durability even when subjected to thermal stress.

### COMPOSITION

support

non-woven PP fabric

grey adhesive butyl compound

release liner

PP film



| Properties                         | standard    | value                | USC conversion |
|------------------------------------|-------------|----------------------|----------------|
| Initial Tack                       | ASTM D 2979 | 8 N                  | -              |
| Reaction to fire                   | EN 13501-1  | class E              | -              |
| Temperature resistance             | -           | -30 / +90 °C         | -22 / +194 °F  |
| Application temperature            | -           | 0 / +40 °C           | +32 / +104 °   |
| Storage temperature <sup>(1)</sup> | -           | +5 / +40 °C          | +41 / +104 °   |
| Solvents                           | -           | no                   | -              |
| VOC emissions                      | ISO 16000   | 30 μg/m <sup>3</sup> | -              |
| French VOC classification          | ISO 16000   | A+                   | -              |

 $^{(1)}$ Store the product in a cool, dry place for no more than 12 months. Waste classification (2014/955/EU): 08 04 10.

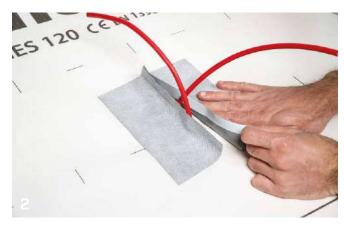
### ■ CODES AND DIMENSIONS

| CODE        | liner    | В    | s    | L   | liner     | В    | S     | L    |   |
|-------------|----------|------|------|-----|-----------|------|-------|------|---|
|             | [mm]     | [mm] | [mm] | [m] | [in]      | [in] | [mil] | [ft] |   |
| MANPLA2080  | 20 / 80  | 100  | 1    | 10  | 0.8 / 3.2 | 3.9  | 39    | 33   | 6 |
| MANPLA20180 | 20 / 180 | 200  | 1    | 10  | 0.8 / 7.1 | 7.9  | 39    | 33   | 2 |

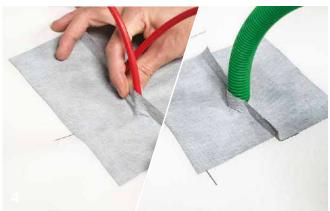
### ■ RECOMMENDATIONS FOR INSTALLATION

SEALING OF CABLES AND CORRUGATED THROUGH PIPES









WINDOW NODE - WATERPROOFING BELOW TIE BEAM







### TIME SAVING

Thanks to the pre-cut separating film and the product deformation properties, small cables and irregular elements can be sealed without loss of time or accumulation of bulky material.

### **SMART**

Thanks to the pre-cut liner, it is suitable for countless applications, for example around the perimeter of beams and through-beams or for sealing windows.

### **MANICA FLEX**

### SEALING SLEEVE FOR CONDUIT AND CABLE **PASSAGE**

### **COMPLETE RANGE**

Available in several variants to ensure tightness in different situations. Available in both sealable TPU and EPDM.

### **HERMETIC**

Ensures airtightness and watertightness for cables and other pass through elements.

### COMPOSITION

MANICA FLEX - EPDM

Extruded compact EPDM



### MANICA FLEX - TPU

TPU



### CODES AND DIMENSIONS

#### MANICA FLEX - EPDM

| CODE        | В    | S    | L   | В    | S     | L    |   |
|-------------|------|------|-----|------|-------|------|---|
|             | [mm] | [mm] | [m] | [in] | [mil] | [ft] |   |
| MANFEPDM100 | 100  | 1    | 10  | 3.9  | 39    | 33   | 1 |
| MANFEPDM150 | 150  | 1    | 10  | 5.9  | 39    | 33   | 1 |

### MANICA FLEX - TPU

| CODE       | В    | S    | Н    | В    | S     | Н    |    |
|------------|------|------|------|------|-------|------|----|
|            | [mm] | [mm] | [mm] | [in] | [mil] | [in] |    |
| MANFTPU300 | 300  | 0,4  | 300  | 11.8 | 16    | 11.8 | 10 |
| MANFTPU430 | 430  | 0,4  | 430  | 16.9 | 16    | 16.9 | 10 |

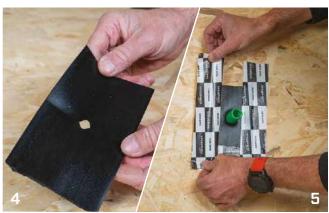
Waste classification (2014/955/EU): 17 02 03.

### ■ RECOMMENDATIONS FOR INSTALLATION

### MANICA FLEX - EPDM: SEALING OF CABLES AND CORRUGATED TUBES THROUGH PIPES





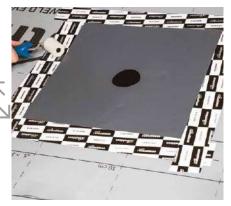




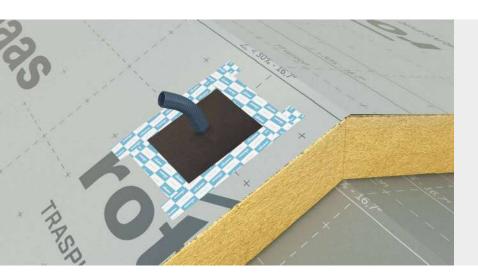
MANICA FLEX - TPU: SEALING OF A THROUGH PIPE







ROLLER, WELD LIQUID



### **FAST INSTALLATION**

Both versions can be quickly sealed with a Rothoblaas tape and can be repositioned. The TPU version can be heat or chemically sealed.

### **SMART**

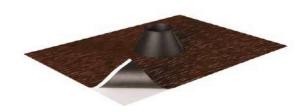
The EPDM version is supplied in handy rolls, so that you can cut it to the required size without having to order several sizes.

In addition, numerous through elements can be sealed with a single sleeve as it can be perforated at several points as required.

### **MANICA POST**

### ADHESIVE SEALING SLEEVE FOR OUTDOORS

- Aluminium coated for permanent UV stability
- Excellent butyl adhesion
- Resistant to thermal stress





### CODES AND DIMENSIONS

| CODE     | В    | Н    | Ø       | В    | Н    | Ø         | colour    |   |
|----------|------|------|---------|------|------|-----------|-----------|---|
|          | [mm] | [mm] | [mm]    | [in] | [in] | [in]      |           |   |
| MANPOST1 | 300  | 200  | 25 / 32 | 11.8 | 7.9  | 1.0 / 1.3 | brown     | 5 |
| MANPOST2 | 300  | 200  | 42 / 55 | 11.8 | 7.9  | 1.7 / 2.2 | brown     | 5 |
| MANPOST3 | 230  | 230  | 42 / 55 | 9.1  | 9.1  | 1.7 / 2.2 | aluminium | 4 |

Waste classification (2014/955/EU): 17 09 04.

### **MANICA LEAD**

### LEAD PROFILE WITH EPDM SLEEVE

- Excellent for waterproofing lifeline supports such as TOWER
- It can be used on roofs with different slopes
- Perfectly sealed EPDM sleeve



### CODES AND DIMENSIONS

| CODE    | s    | В    | L    | Ø    | S     | В    | L    | Ø    | material            |   |
|---------|------|------|------|------|-------|------|------|------|---------------------|---|
|         | [mm] | [mm] | [mm] | [mm] | [mil] | [in] | [in] | [in] |                     |   |
| MANEPDM | -    | -    | -    | 48   | -     | -    | -    | 1.9  | EPDM                | 1 |
| MANLEAD | 1    | 310  | 405  | -    | 39    | 12.2 | 15.9 | -    | lead <sup>(1)</sup> | 1 |

(1) Avoid contact with skin, eyes and food. Do not produce and breathe dust. Waste classification (2014/955/EU): 17 04 03.

### I TUBE STOPPER

### **CABLE SEALING PLUGS**

- For sealing corrugated pipes
- Quick and easy installation
- No special equipment required
- It can be perforated for cable routing









### **■ CODES AND DIMENSIONS**

| CODE       | Ø    | Ø    |    |
|------------|------|------|----|
|            | [mm] | [in] |    |
| TUBESTOP20 | 20   | 0.8  | 20 |
| TUBESTOP25 | 25   | 1.0  | 20 |
| TUBESTOP32 | 32   | 1.3  | 20 |

Waste classification (2014/955/EU): 17 02 03.

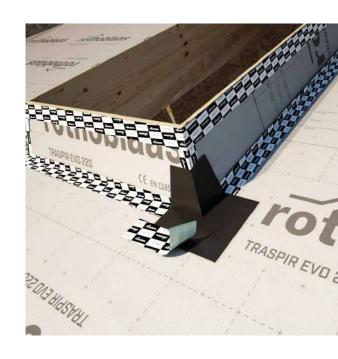
### **I** ALPHA

### PRESHAPED PROFILE FOR SEALING CORNERS

- Reinforces edges and critical points
- Protects against friction wear
- Double version: for concave and convex corners
- It can be used both on walls and roofs







### ■ CODES AND DIMENSIONS

| CODE       | В    | L    | Н    | В    | L    | Н    | version  |    |
|------------|------|------|------|------|------|------|----------|----|
|            | [mm] | [mm] | [mm] | [in] | [in] | [in] |          |    |
| 1 ALPHAIN  | 160  | 100  | 100  | 6.3  | 3.9  | 3.9  | internal | 10 |
| 2 ALPHAOUT | 180  | 180  | 100  | 7.1  | 7.1  | 3.9  | external | 10 |

Waste classification (2014/955/EU): 17 02 03.

### **LITE BAND**

### ACRYLIC SINGLE-SIDED ADHESIVE TAPE

- Good compromise between versatility and price. Suitable for adhesion to non-woven fabric membranes
- Ideal for sealing and shaping elements to be consolidated with XEPOX resins



### ■ CODES AND DIMENSIONS

| CODE       | В    | L   | В    | L    |    |
|------------|------|-----|------|------|----|
|            | [mm] | [m] | [in] | [ft] |    |
| LITEBAND50 | 50   | 50  | 2.0  | 164  | 30 |



### **I** DGZ







### DOUBLE THREADED SCREW FOR INSULATION



### **■ CODES AND DIMENSIONS**

| $d_1$  | CODE    | L    | pcs |
|--------|---------|------|-----|
| [mm]   |         | [mm] |     |
|        | DGZ7220 | 220  | 50  |
| 7      | DGZ7260 | 260  | 50  |
| TX 30  | DGZ7300 | 300  | 50  |
| 1 / 30 | DGZ7340 | 340  | 50  |
|        | DGZ7380 | 380  | 50  |
|        | DGZ9240 | 240  | 50  |
|        | DGZ9280 | 280  | 50  |
|        | DGZ9320 | 320  | 50  |
| 9      | DGZ9360 | 360  | 50  |
| TX 40  | DGZ9400 | 400  | 50  |
|        | DGZ9440 | 440  | 50  |
|        | DGZ9480 | 480  | 50  |
|        | DGZ9520 | 520  | 50  |

Upon request, EVO version is available.



# **I THERMOWASHER**

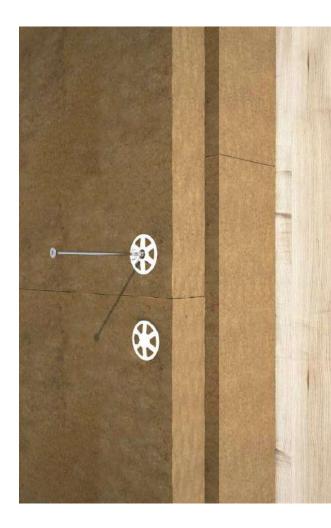
### WASHER TO FASTEN INSULATION TO TIMBER

• Incorporated hole cover to avoid thermal bridges



### ■ CODES AND DIMENSIONS

| CODE     | d <sub>SCREW</sub> | ахbхс       | pcs |
|----------|--------------------|-------------|-----|
|          | [mm]               | [mm]        |     |
| THERMO65 | 6/8                | 65 x 4 x 20 | 700 |



# **I ISULFIX**

# ANCHOR FOR FASTENING INSULATION TO BRICKWORK



### ■ CODES AND DIMENSIONS

| CODE        | L    | $d_{HOLE}$ | $d_{HEAD}$ | Α    | pcs |
|-------------|------|------------|------------|------|-----|
|             | [mm] | [mm]       | [mm]       | [mm] |     |
| ISULFIX8110 | 110  |            |            | 80   | 250 |
| ISULFIX8150 | 150  | 8          | 60         | 120  | 150 |
| ISULFIX8190 | 190  |            |            | 160  | 100 |

| CODE      | d <sub>HEAD</sub><br>[mm] | description                           | pcs |
|-----------|---------------------------|---------------------------------------|-----|
| ISULFIX90 | 90                        | additional washer for soft insulation | 250 |

A= maximum fastening thickness



# **I REACH REGULATION**

### Registration, Evaluation, Autorisation of Chemicals (CE n. 1907/2006)

It's the European regulation for the management of chemical substances as such or as components of **preparations** (mixtures) and **items** (ref. Art. 3 points 2 and 3). This regulation attributes precise responsibilities to each link of the supply chain regarding the communication and safe use of hazardous substances.

### WHAT'S IT FOR?

REACH aims to ensure a high level of human health and environmental protection. The introduction of REACH requires the collection and communication of complete information on the dangers of certain substances and their safe use within the supply chain (regulation CLP 1272/2008).

The regulation provides for continual updating of the information and control by ECHA (the European Chemicals Agency).

In particular, for users, these concepts translate into:

- SVHC Substances Of Very High Concern List of any hazardous substances contained in items
- SDS Safety Data Sheet

  Document that contains the information for correct management of every hazardous mixture



We have added **REACH compliance** among the **selection parameters for our products and production processes.** 

In this way, we can guarantee high quality standards in terms of health and environmental protection.

### ■ REACH COMPLIANCE













### **PROJECT**

Product design and choice of the most suitable materials

### **PRODUCTION**

Start of the production phase with evaluation of the substances used during the entire process.

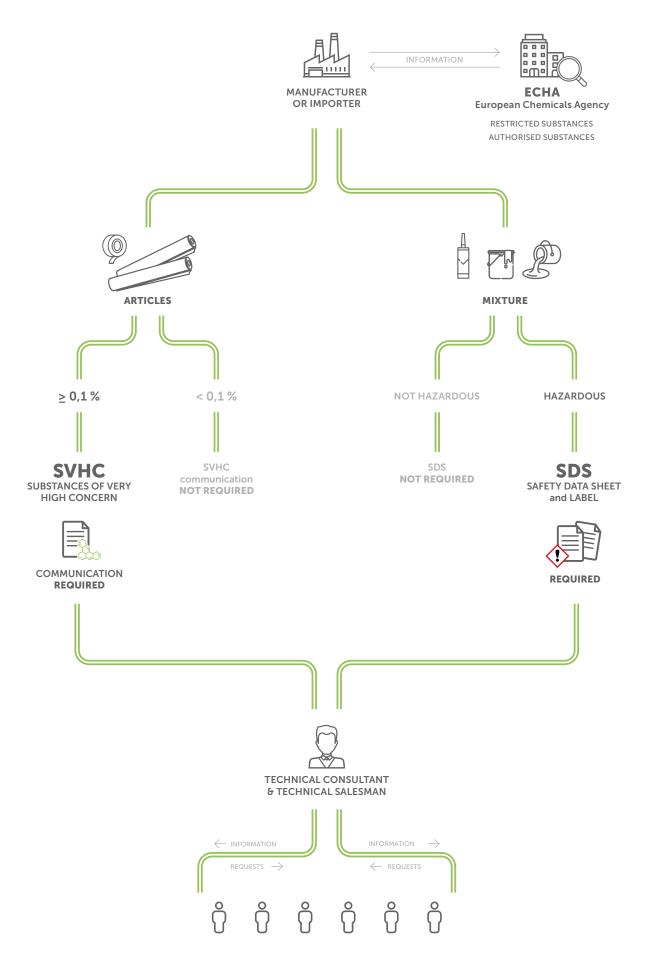
### **REACH COMPLIANCE**

Analysis/screening on samples to verify REACH compliance.

### MARKET

Product meeting the requirements of REACH regulation and Rothoblaas quality standards.

# I REACH PROCESS



# I MEMBRANE GLUE



### ADHESIVE GLUE FOR SEALING MEMBRANES

### **EFFECTIVE**

Solvent-free acrylic adhesive, with good adherence to the most common supports.

### **PRACTICAL**

Easily extruded mix, ready to use and easily removed with water prior to hardening.



### ■ TECHNICAL DATA

| Properties                                      | value                         | USC conversion                 |
|---|-------------------------------|--------------------------------|
| Colour  | black                         | _                              |
| Composition                                     | acrylic without solvents      | -                              |
| Density ISO 1183                                | 1,05 - 1,10 g/cm <sup>3</sup> | 0.60 - 0.64 oz/in <sup>3</sup> |
| Time required for drying 25 °C / 50 %RH         | 24 - 72 hours                 | -                              |
| Temperature resistance once hardened            | -20 / +80 °C                  | -4 / 176 °F                    |
| Application temperature (cartridge and ambient) | +5 / +40 °C                   | +41 / 104 °F                   |
| Application temperature (support)               | -5 / +40 °C                   | +23 / 104 °F                   |
| Emicode (GEV test procedure)                    | EC1 plus                      | -                              |
| VOC content                                     | 0,34% - 5,7 g/L               | -                              |
| Transport temperature                           | -20 °C / +35 °C               | -4 °F / 95 °F                  |
| Storage temperature <sup>(1)</sup>              | +5 °C / +25 °C                | +41 °F / 77 °F                 |

<sup>(1)</sup> Store the product in a dry, covered location for no more than 12 months. Check the expiry date on the packaging. Waste classification (2014/955/EU): 08 04 10.

### CODES AND DIMENSIONS

| CODE          | content | yield of the glue<br>line Ø8 mm | content    | yield of the glue<br>line Ø8 mm | version            |    |
|---------------|---------|---------------------------------|------------|---------------------------------|--------------------|----|
|               | [mL]    | [m]                             | [US fl oz] | [ft]                            |                    |    |
| MEMBRAGLUE310 | 310     | 6                               | 10.48      | 20                              | rigid<br>cartridge | 24 |
| MEMBRAGLUE600 | 600     | 11,6                            | 20.29      | 38                              | soft<br>cartridge  | 20 |



### EMICODE EC1 PLUS

Thanks to the special formulation, the glue achieves the highest level of safety with regard to emissions that are harmful to health.

### **OUICK DRYING**

It offers a good compromise between adhesion and fast drying of the outer film, allowing application on vertical surfaces without slipping problems.

EUH208 Contains CAS 55965-84-9 (3:1), CAS 2634-33-5. May produce an allergic reaction.

# I ECO GLUE







# ADHESIVE GLUE FOR SEALING MEMBRANES ON BIOLOGICAL BASIS

### **ECOLOGICAL**

The compound contains approximately 47 % bio-based carbon (according to ASTM 6866), for greater environmental sustainability.

### **EMICODE EC1 PLUS**

Thanks to the special formulation, it achieves the highest level of safety with regard to emissions that are harmful to health.



### TECHNICAL DATA

| Properties                                    | value                          | USC conversion          |
|---|--------------------------------|-------------------------|
| Colour (wet/dry)                              | white cream/beige              | -                       |
| Density EN 542 +20 °C                         | approx. 1,15 g/cm <sup>3</sup> | 0.67 oz/in <sup>3</sup> |
| Film formation time                           | permanently adhesive           | -                       |
| Time required for drying 20 °C / 50 %RH       | 36 h                           | -                       |
| Temperature resistance once dried             | from -30 °C to +80 °C          | from -22 °F to +176 °F  |
| Application temperature (cartridge)           | from +5 °C to +30 °C           | from +41 °F to +86 °F   |
| Application temperature (ambient and support) | from -5 °C                     | from 23 °F              |
| Solvents                                      | no                             | -                       |
| Emicode (GEV test procedure)                  | EC1 plus                       | -                       |
| French VOC classification                     | A+                             | -                       |
| Transport temperature                         | - 30 °C to +35 °C              | -22 °F / +95 °F         |
| Storage temperature <sup>(1)</sup>            | +15 °C to +25 °C               | +59 °F / +77 °F         |

 $<sup>^{(1)}</sup>$ Store the product in a cool, dry place for no more than 18 months. Check the expiry date on the cartridge. Waste classification (2014/955/EU): 08 04 10.

EUH208 Contains CAS 55965-84-9 (3:1), CAS 2634-33-5. May produce an allergic reaction; EUH210 Safety data sheet available on request

### **■ CODES AND DIMENSIONS**

| CODE       | content | yield of the glue<br>line Ø8 mm | content    | yield of the glue<br>line Ø8 mm | version            |    |
|------------|---------|---------------------------------|------------|---------------------------------|--------------------|----|
|            | [mL]    | [m]                             | [US fl oz] | [ft]                            |                    |    |
| ECOGLUE310 | 310     | 6,2                             | 10.48      | 20                              | rigid<br>cartridge | 20 |
| ECOGLUE600 | 600     | 11,9                            | 20.29      | 39                              | soft<br>cartridge  | 20 |



### **COMPLETE SYSTEM**

Together with VAPOR IN GREEN 200 it creates a more environmentally sustainable airtight layer.

### **DURABLE | DIN 4108-11**

The glue has passed the artificial ageing test according to DIN 4108-11, which guarantees durability over time.

# **I SUPERB GLUE**





### HIGH ELASTICITY ADHESIVE GLUE FOR **SEALING MEMBRANES**

### HIGH PERFORMANCE

Adhesion and elasticity stable over time, free of solvents and harmful substances. Storage and use at low temperatures possible.

### MAXIMUM ELASTICITY

Formula designed to ensure elasticity and adhesion even after drying.



### **■ TECHNICAL DATA**

| Properties                                | value                                | USC conversion          |
|---|--------------------------------------|-------------------------|
| Colour (wet)                              | light blue                           | -                       |
| Colour (dry)                              | transparent blue                     | -                       |
| Composition                               | modified acrylate-polymer dispersion | -                       |
| Density EN 542 +20 °C                     | approx. 1,02 g/cm <sup>3</sup>       | 0.59 oz/in <sup>3</sup> |
| Yield with strip Ø8 mm (cartridge 310 mL) | 6,2 m                                | 20.34 ft                |
| Yield with strip Ø8 mm (cartridge 600 mL) | 11,9 m                               | 39.04 ft                |
| Film formation time                       | permanently adhesive                 | -                       |
| Time required for drying 20 °C / 50 %RH   | 48 hours                             | -                       |
| Temperature resistance once dried         | -30 / +80 °C                         | -22 / +176 °F           |
| Application temperature (cartridge)       | +5 / +30 °C                          | -13 / +86 °F            |
| Application temperature (ambient)         | -5 °C                                | 23 °F                   |
| Application temperature (support)         | +5 / +30 °C                          | -13 / +86 °F            |
| Solvents                                  | no                                   | -                       |
| Emicode (GEV test procedure)              | EC1 plus                             | -                       |
| French VOC classification                 | A+                                   | -                       |
| Transport temperature                     | -30 °C / +40 °C                      | -22 °F / +104 °F        |
| Storage temperature <sup>(1)</sup>        | +5 °C / +25 °C                       | +41 °F/ +77 °F          |
| Storage time <sup>(2)</sup>               | up to 24 months                      | -                       |

<sup>&</sup>lt;sup>(1)</sup>Store the product in a dry, covered location.

EUH208 Contains CAS 55965-84-9 (3:1), CAS 2634-33-5. May produce an allergic reaction; EUH210 Safety data sheet available on request.

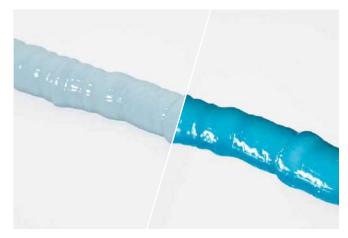
### CODES AND DIMENSIONS

| CODE          | content<br>[mL] | content<br>[US fl oz] | version            |    |
|---------------|-----------------|-----------------------|--------------------|----|
| SUPERBGLUE310 | 310             | 10.48                 | rigid<br>cartridge | 20 |
| SUPERBGLUE600 | 600             | 20.29                 | soft<br>cartridge  | 20 |

<sup>(2)</sup> Check the expiry date on the cartridge.

Waste classification (2014/955/EU): 08 04 10.

### ■ GLUE PROPERTIES











### PERMANENT ADHESION | DIN 4108-11

The glue is tested for elastic and durable seals using DIN tests.

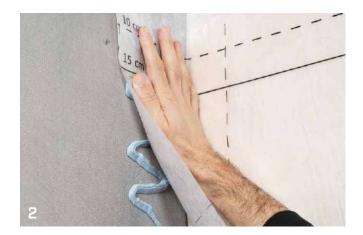
### **EMICODE EC1 PLUS**

Thanks to the special formulation, it achieves the highest level of safety with regard to emissions that are harmful to health.

# I RECOMMENDATIONS FOR INSTALLATION: INDOOR GLUES

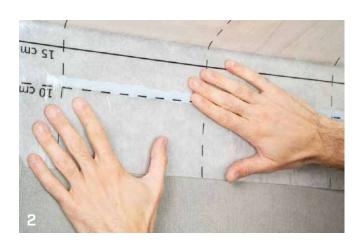
MEMBRANE CONNECTION TO WALL - CONCRETE





MEMBRANE CONNECTION TO ROOF - CONCRETE





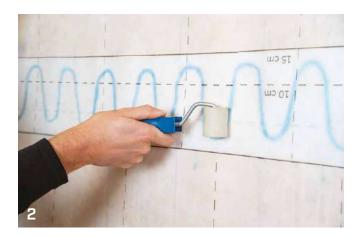
MEMBRANE CONNECTION TO ROOF - OSB





### MEMBRANE OVERLAP SEALING





### WINDOW HOLE SEALING





PLASTER BAND LITE

### MEMBRANE CONNECTION TO WALL - CONCRETE





1 PRIMER, PRIMER SPRAY

# **I OUTSIDE GLUE**

### HIGH ELASTICITY UNIVERSAL ADHESIVE GLUE FOR EXTERNAL USE



### **ELASTIC**

The butyl composition offers high joint elasticity over time, even in the case of small deformations or movements.

### **UNIVERSAL**

Guarantees sealing and attachment to the most common materials, including damp or wet supports.



### **TECHNICAL DATA**

| Properties  | value           | USC conversion   |
|---|-----------------|------------------|
| Colour  | grey            | -                |
| Composition   | butyl rubber    | -                |
| Density   | 1,39 g/mL       | 222.9 oz/gal     |
| Yield with strip Ø8 mm (cartridge 310 mL)           | approx. 6 m     | approx. 19.69 ft |
| Yield with strip Ø8 mm (cartridge 600 mL)           | approx. 12 m    | approx. 39.37 ft |
| Film formation time 20 °C / 50 %RH                  | 20 - 30 min     | -                |
| Time required for complete hardening 20 °C / 50 %RH | 4 - 6 weeks     | -                |
| Temperature resistance once hardened                | -25 / +70 °C    | -13 / +158 °F    |
| Application temperature (cartridge)                 | +5 / +40 °C     | -13 / +158 °F    |
| Application temperature (ambient)                   | +5 / +40 °C     | -13 / +158 °F    |
| Application temperature (support)                   | +5 / +40 °C     | -13 / +158 °F    |
| Watertightness after hardening                      | conforming      | -                |
| Transport temperature                               | +5 / +30 °C     | -13 / +86 °F     |
| Storage temperature <sup>(1)</sup>                  | +5 / +25 °C     | -13 / +77 °F     |
| Storage time <sup>(2)</sup>                         | up to 12 months | -                |

<sup>(1)</sup> Store the product in a dry, covered location.

(2) Check the expiry date on the cartridge. Waste classification (2014/955/EU): 08 04 10.

EUH066 Repeated exposure may cause skin dryness or cracking. EUH210 Safety data sheet available on request.

### CODES AND DIMENSIONS

| CODE       | content<br>[mL] | content<br>[US fl oz] | version            |    |
|------------|-----------------|-----------------------|--------------------|----|
| OUTGLUE310 | 310             | 10.48                 | rigid<br>cartridge | 24 |
| OUTGLUE600 | 600             | 20.29                 | soft<br>cartridge  | 12 |

### ■ FIELDS OF APPLICATION











### WATER AND UV RESISTANT

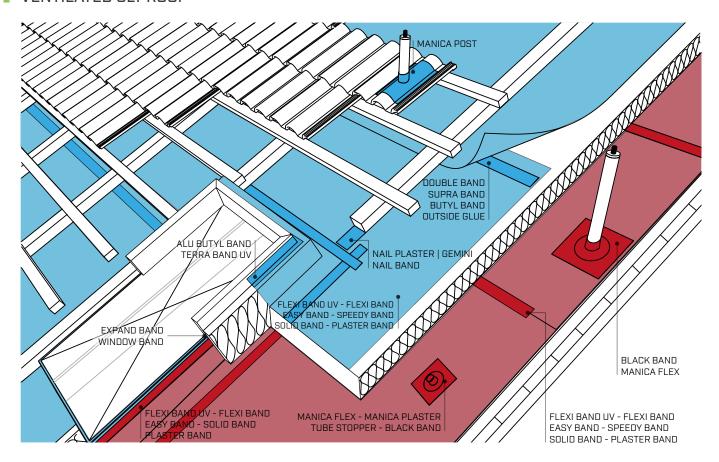
The product offers excellent UV stability and is also suitable for sealing in the event of the presence of water during installation without the need for drying time.

### **DURABILITY**

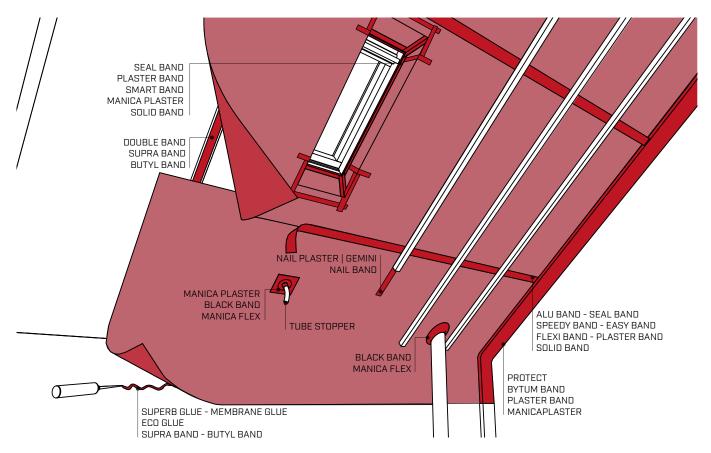
The modified butyl mix allows the product to remain elastic over time without altering its hermetic properties, even under high thermal stress.

# **I APPLICATION SETTINGS**

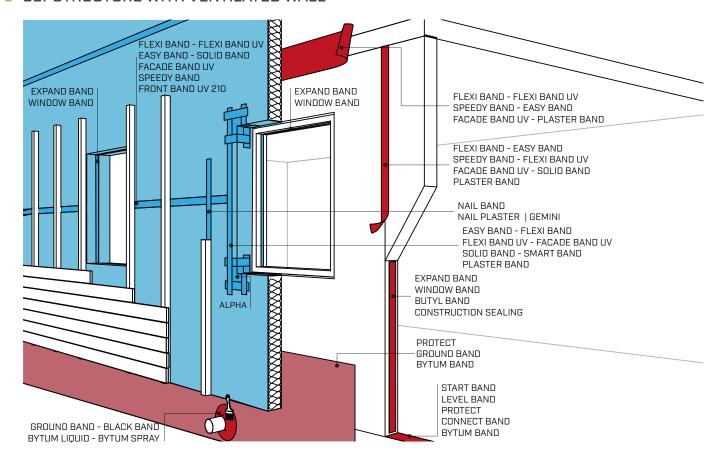
### VENTILATED CLT ROOF



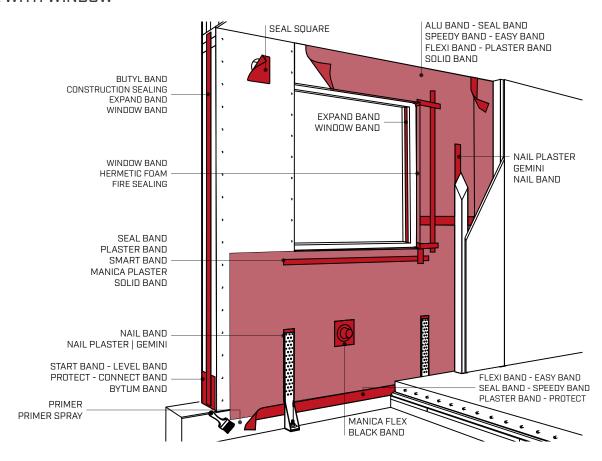
### FRAME ROOF ON MASONRY WALL



### CLT STRUCTURE WITH VENTILATED WALL

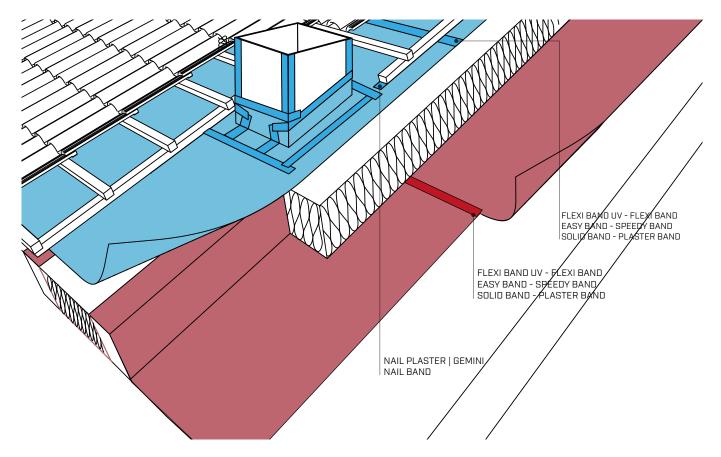


### ■ FRAME WALL WITH WINDOW

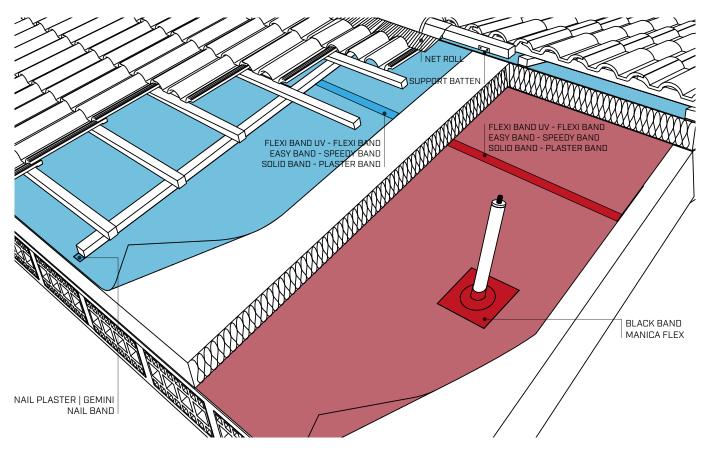


# **I APPLICATION SETTINGS**

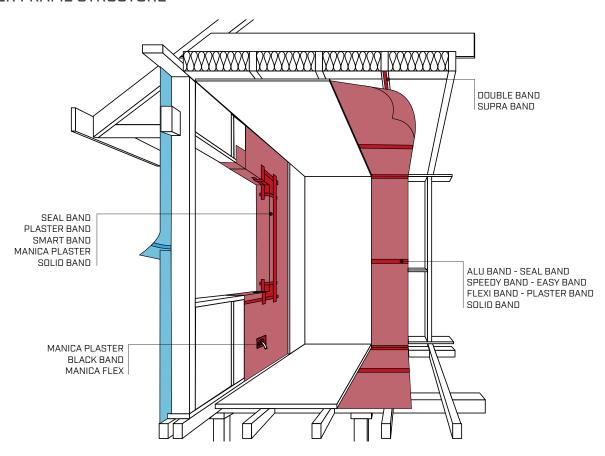
### ■ RECOVERY OF A TIMBER ROOF



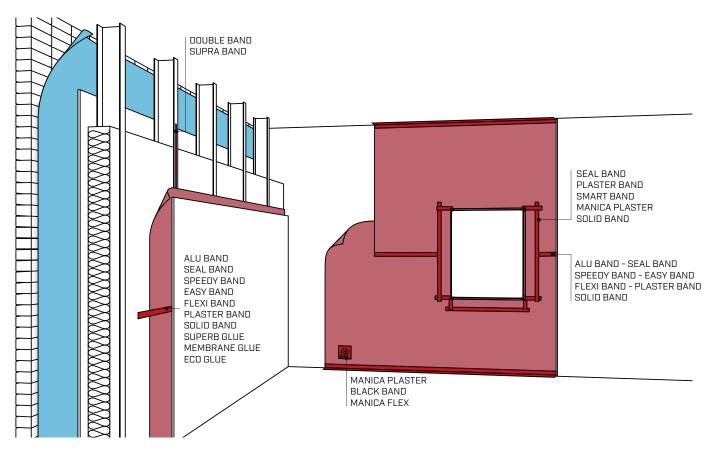
### ■ CONCRETE AND MASONRY ROOF



### **■ TIMBER FRAME STRUCTURE**



### STEEL FRAME WITH BRICK CLADDING



# ROOF AND VENTILATION ELEMENTS

# ROOF AND VENTILATION ELEMENTS

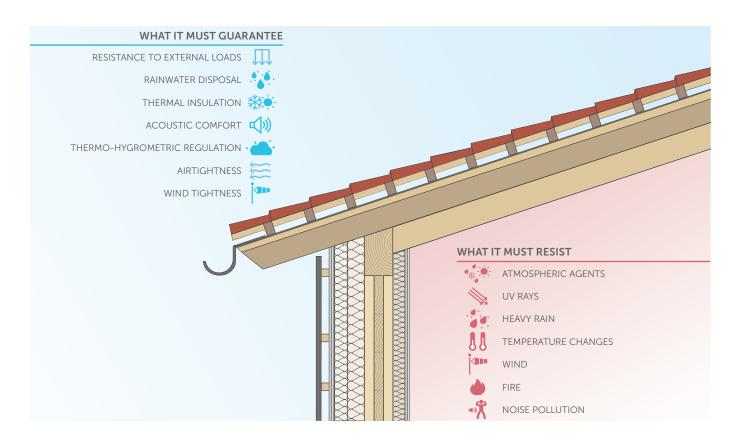
# **I** ROOF AND VENTILATION **ELEMENTS**

| <b>NET ROLL</b> FLEXIBLE VENTILATED UNDER-RIDGE               |
|---|
| STANDARD ROLL  FLEXIBLE VENTILATED UNDER-RIDGE                |
| METAL ROLL FLEXIBLE VENTILATED ALUMINIUM UNDER-RIDGE          |
| BRUSH VENT RIGID UNDER-RIDGE WITH SIDE BRUSHES                |
| PEAK VENT AISI 430 RIGID UNDER-RIDGE KIT                      |
| PEAK ONE  VENTILATED UNDER-RIDGE FOR SINGLE PITCH             |
| PEAK EASY  VENTILATED RIGID RIDGE ROLL                        |
| PEAK HOOK RIDGE FASTENING HOOK FOR FLAT AND SHAPED TILES      |
| SUPPORT BATTEN  METAL BATTEN-HOLDERS                          |
| ALU FLASH CONNECT ALUMINIUM AND SELF-ADHESIVE BUTYL VERSION   |
| SOFT FLASH CONNECT EPDM AND BUTYL SELF-ADHESIVE VERSION       |
| MANICA ROLL SELF-ADHESIVE LEAD AND BUTYL VERSION              |
| GUTTER FLASHING   |
| VALLEY ALU STRENGTHENING ELEMENT FOR VALLEYS                  |
| GASKET GASKET FOR VALLEY                                      |
| SNOW STOP SNOW STOPPER HOOK FOR RIDGE TILES AND TILES 181     |
| TILE STOP S S PRE-SHAPED HOOKS FOR PLAIN TILES                |
| TILE STOP L L PRE-SHAPED HOOKS FOR PLAIN TILES                |
| TILE STOP WIND PRE-SHAPED BRACING HOOKS FOR TILES             |
| TILE STOP WIND COPPO PRE-SHAPED BRACING HOOKS FOR RIDGE TILES |

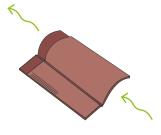
| VENT MESH FLEXIBLE VENTILATION GRID                                    |
|--|
| VENT GRILLE PVC VENTILATION GRID                                       |
| <b>VENT FOLD</b> PRE-BENT GRID FOR VENTILATION. 187                    |
| BIRD SPIKE RIGID BIRD SPIKES   |
| BIRD COMB STANDARD EAVES BIRD COMBS                                    |
| BIRD COMB EVO TWIN ROW EAVES BIRD COMB                                 |
| VENT SHAPE  VENTILATION GRID FOR ROOFS MADE  OF TILES OF VARIOUS SHAPE |
| RAIN TUBE  TEMPORARY DOWNPIPE FOR CONSTRUCTION SITE PHASES             |

# VENTILATION AND ROOF

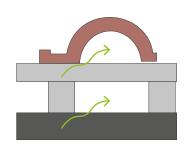
Many factors need to be taken into account when designing and building a safe, healthy and durable roof.



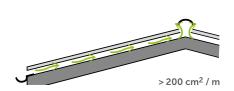
### VENTILATION AND MICRO-VENTILATION



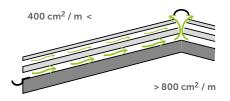
The micro-ventilation created under the tiles is favoured by the geometry of the tile itself. It is sufficient for disposing of excess humidity.



Ventilation under the roof is achieved by means of tile-holder battens and, in addition to disposing of humidity, it ensures the removal of excessive heat accumulated.



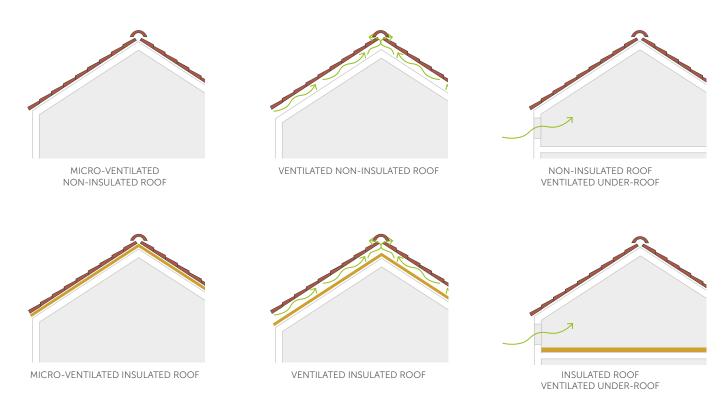
For a micro-ventilated roof, it is advisable to ensure a gap with a section of at least 200 cm<sup>2</sup> for each linear metre of pitch.



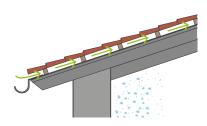
For a ventilated roof, it is advisable to ensure a gap with a section varying from a minimum of 400 cm<sup>2</sup> to a maximum of 800 cm<sup>2</sup> per linear metre of pitch.

### TYPES OF ROOFS

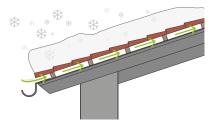
Several factors determine this aspect: the construction tradition of the place where the roof is built, the experience of the builder and the specific requirements of the client.



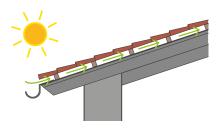
### THE ADVANTAGES OF GOOD VENTILATION



Good ventilation helps the water vapour inside the building envelope to dry, preventing the formation of interstitial condensation at the insulation and of the structure.



In winter, ventilation makes snow that may have accumulated on the roof to melt evenly, preventing it from slipping uncontrollably.



During the warmer months, ventilation removes some of the thermal energy stored under the roof, contributing to improved housing comfort.



The ventilation layer offers additional protection in the event of accidental infiltration, as it creates a second layer of water flow and prevents water from stagnating.

### DESIGNVENTILATION

### WHAT IS THE CHIMNEY EFFECT?

In order for a hot air balloon to fly and overcome the force of gravity, the density of the air inside the envelope must be reduced. How? Warming it up.

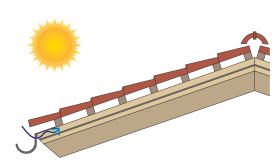
The density of confined air will be lower than the density of the outside air and the balloon will tend to rise upwards.

The same phenomenon occurs in ventilated roofs and is known as the "chimney effect".

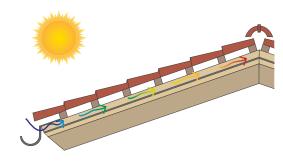


### HOW VENTILATION TAKES PLACE

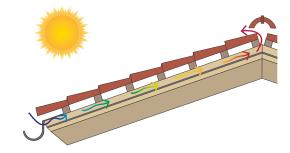
Solar radiation heats the bent tiles. The ventilation chamber underneath acts as an "air cushion", preventing the direct passage of heat to the lay-



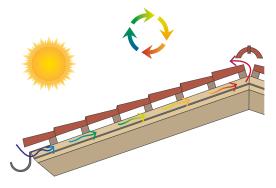
The air heated in the ventilation chamber, which is less dense than unheated air, rises upwards, also driven by the outside air entering through the eaves openings.



Then air leaves the ridge and mixes with the ambient air. This creates a vacuum inside the air chamber causing it to "empty". The lower pressure inside the chamber causes unheated outside air to be drawn in.



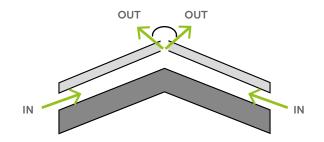
The air coming out of the ridge line creates a vacuum in the air chamber, inducing a draught of unheated outdoor air, which is transported into the ventilation chamber.



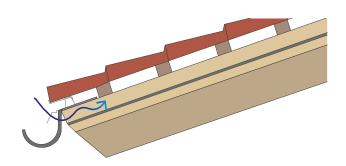
### LOCATION OF OPENINGS

To ensure that the ventilation cycle occurs without interruption it is essential to:

- create a proper air inlet near the gutter;
- ensure proper air outlet at the ridge line.

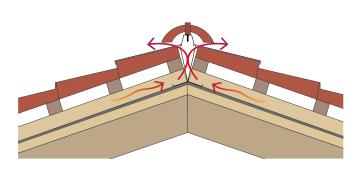


### **GUTTER**



The most effective way to achieve a proper air inlet near the gutter is to use all those products that allow air to enter but protect the roof from intrusion by birds and small animals. The solutions offered by Rothoblaas include the ventilation grilles and eaves bird combs illustrated in this chapter.

### RIDGE LINE



Solutions that allow air to pass through must be used in order to achieve a proper air inlet near the ridge line. Rothoblaas offers rigid or flexible ventilated under-ridges.

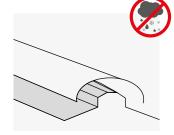
### INSTALLATION AND MAINTENANCE



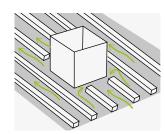
Protect air inlets and outlets from insects and birds, minimising section obstruction.



Check that the gutter and ridge are free of obstacles that could impede air circulation.



Ensure water and snow transported by the wind near the ridge is sealed out.



Avoid battening or other impediments that could block the upward flow of air heated along the slope.

# RIDGE

### NET ROLL

### FLEXIBLE VENTILATED UNDER-RIDGE

### **FLEXIBLE**

The polypropylene ventilation fabric ensures excellent adaptability during installation.

### **DOUBLE SECURITY**

The ventilation strip, which is sewn and glued to the pleated wings, guarantees that the solution remains intact during installation and continues to be effective over time.



### TECHNICAL DATA

| Properties                                     | value                          | USC conversion |
|--|--------------------------------|----------------|
| Air passage                                    | approx. 150 cm <sup>2</sup> /m | 7.09 in²/ft    |
| Elongation capacity (pleated aluminium strips) | approx. 45 %                   | -              |
| Butyl tape width                               | 15 mm                          | 0.6 in         |
| Butyl tape thermal resistance                  | -40 / +90 °C                   | -40 / +194 °F  |
| Application temperature                        | +5 / +40 °C                    | +41 / +104 °F  |
| UV resistance (aluminium straps)               | permanent                      | -              |
| Storage temperature <sup>(1)</sup>             | +5 / +30 °C                    | +41 / +86 °F   |

 $<sup>\</sup>ensuremath{^{(1)}}$  Keep the product in a dry, covered location. Waste classification (2014/955/EU): 17 09 04.

### **CODES AND DIMENSIONS**

| CODE        | В    | L   | В    | L    | colour    | RAL  |   |
|-------------|------|-----|------|------|-----------|------|---|
|             | [mm] | [m] | [in] | [ft] |           |      |   |
| NETRED310   | 310  | 5   | 12.2 | 16   | brick red | 8004 | 4 |
| NETBRO310   | 310  | 5   | 12.2 | 16   | brown     | 8019 | 4 |
| NETBLA310   | 310  | 5   | 12.2 | 16   | black     | 9005 | 4 |
| NETRED390   | 390  | 5   | 15.4 | 16   | brick red | 8004 | 4 |
| NETBRO390   | 390  | 5   | 15.4 | 16   | brown     | 8019 | 4 |
| NETBLA390   | 390  | 5   | 15.4 | 16   | black     | 9005 | 4 |
| NETRED39020 | 390  | 20  | 15.4 | 66   | brick red | 8004 | 1 |
| NETBRO39020 | 390  | 20  | 15.4 | 66   | brown     | 8019 | 1 |
| NETBLA39020 | 390  | 20  | 15.4 | 66   | black     | 9005 | 1 |



### **EASY TO SHAPE**

Aluminium straps and butyl tape ensure adaptability to the profile of the roof elements.

### **MATERIALS**

Aluminium, PP non-woven fabric, butyl tape.

### STANDARD ROLL

### FLEXIBLE VENTILATED UNDER-RIDGE

### ADJUSTABLE

The polypropylene fabric ensures excellent flexibility during installation and a high aeration surface.

### COST/PERFORMANCE

The adhesive butyl tape offers excellent adhesion on ridge tiles and tiles.



### **CODES AND DIMENSIONS**

| CODE        | В    | L   | В    | L    | colour     | RAL  |   |
|-------------|------|-----|------|------|------------|------|---|
|             | [mm] | [m] | [in] | [ft] |            |      |   |
| STANDRED390 | 390  | 5   | 15.4 | 16   | brick red  | 8004 | 4 |
| STANDBRO390 | 390  | 5   | 15.4 | 16   | brown      | 8019 | 4 |
| STANDANT390 | 390  | 5   | 15.4 | 16   | anthracite | 7021 | 4 |

Waste classification (2014/955/EU): 17 09 04.









### METAL ROLL

### FLEXIBLE VENTILATED ALUMINIUM UNDER-RIDGE

### **EXCELLENT ADHESION**

The special 4 cm wide butyl tape ensures strong and immediate adhesion to various surfaces.

### **DURABILITY**

The choice of metal material ensures excellent UV stability even in harsh climate zones.



### TECHNICAL DATA

| Properties                         | value            | USC conversion |
|------------------------------------|------------------|----------------|
| Material                           | aluminium, butyl | -              |
| Butyl tape width                   | 40 mm            | 1.57 in        |
| Butyl tape adhesion property       | > 19 N/cm        | 1.68 lb/in     |
| UV resistance                      | permanent        | -              |
| Application temperature            | +5 / +30 °C      | +41 / +86 °F   |
| Temperature resistance             | -30 / +90 °C     | -22 / +194 °F  |
| Storage temperature <sup>(1)</sup> | 0 / +25 °C       | +32 / +77 °F   |

 $<sup>^{(1)}</sup>$  Keep the product in a dry, covered location. Waste classification (2014/955/EU): 17 09 04.

### **CODES AND DIMENSIONS**

| CODE      | В    | L   | В    | L    | colour     | RAL  |   |
|-----------|------|-----|------|------|------------|------|---|
|           | [mm] | [m] | [in] | [ft] |            |      |   |
| METRED400 | 400  | 5   | 15.8 | 16   | brick red  | 8004 | 4 |
| METBRO400 | 400  | 5   | 15.8 | 16   | brown      | 8017 | 4 |
| METANT400 | 400  | 5   | 15.8 | 16   | anthracite | 7021 | 4 |









### **BRUSH VENT**

### RIGID UNDER-RIDGE WITH SIDE BRUSHES

### **FAST INSTALLATION**

Thanks to its soft bristles, it adapts easily to the profile of the cover without the need for shaping.

### **PROTECTION**

The bristles provide effective protection against the intrusion of water and foreign elements.



### **TECHNICAL DATA**

| Properties             | value                    | USC conversion |
|------------------------|--------------------------|----------------|
| Material               | PVC                      | -              |
| Screen length          | 60 mm                    | 2.36 in        |
| Air passage            | ≥ 200 cm <sup>2</sup> /m | ≥ 9.45 in²/ft  |
| UV resistance          | permanent                | -              |
| Temperature resistance | -20 / +80 °C             | -4 / +176 °F   |

Waste classification (2014/955/EU): 17 02 03.

### **CODES AND DIMENSIONS**

| CODE         | В    | Н    | L   | В    | Н    | L    | colour    | RAL  |    |
|--------------|------|------|-----|------|------|------|-----------|------|----|
|              | [mm] | [mm] | [m] | [in] | [in] | [ft] |           |      |    |
| BRUVENRED175 | 175  | 75   | 1   | 6.9  | 3.0  | 3    | brick red | 8004 | 20 |
| BRUVENBRO175 | 175  | 75   | 1   | 6.9  | 3.0  | 3    | brown     | 8019 | 20 |
| BRUVENBLA175 | 175  | 75   | 1   | 6.9  | 3.0  | 3    | black     | 9005 | 20 |









# RIDGE

### PEAK VENT AISI 430

### RIGID UNDER-RIDGE KIT

### **HIGH-PERFORMANCE SOLUTION**

Ready to use kit, including under-ridge, screws and adjustable brackets.

### PERMANENT UV STABILITY

The robust stainless steel grid and pleated aluminium wings guarantee constant ventilation, stable over time.



### TECHNICAL DATA

| Properties                                   | value                  | USC conversion            |
|--|------------------------|---------------------------|
| Butyl tape width                             | 20 mm                  | 0.8 in                    |
| Air passage                                  | 500 cm <sup>2</sup> /m | 23.63 in <sup>2</sup> /ft |
| Butyl thermal resistance                     | -40 / +90 °C           | -40 / +194 °F             |
| Application temperature                      | +5 / +40 °C            | +41 / +104 °F             |
| UV resistance                                | permanent              | -                         |
| Water tightness (when installed under tiles) | conforming             | -                         |
| Storage temperature                          | +5 / +30 °C            | +41 / +86 °F              |

Waste classification (2014/955/EU): 17 09 04.

For the installation, as many brackets and ventilation elements as linear metres of ridge must be used, with the addition of an initial support bracket. In addition, at least four screws must be provided for each bracket, two for fixing it to the battens and two for fixing the ventilation element to the bracket.

EXAMPLE: if my ridge measures 5 linear metres, I will need 5 ventilation elements + 6 support brackets and 24 self-drilling screws.

### CODES AND DIMENSIONS

|   | CODE         | В     | L   | Н    | В     | L    | Н    | colour    | RAL  |    |
|---|--------------|-------|-----|------|-------|------|------|-----------|------|----|
|   |              | [mm]  | [m] | [mm] | [in]  | [ft] | [in] |           |      |    |
| 1 | PVENTREDI380 | 400   | 1   | -    | 15.8  | 3    | -    | brick red | 2001 | 5  |
| ı | PVENTBLAI380 | 400   | 1   | -    | 15.8  | 3    | -    | black     | 9005 | 5  |
| 2 | PVENTPLATE   | 50    | -   | 230  | 2.0   | -    | 9.01 | steel     | -    | 72 |
| 3 | PVENTSCREW   | Ø 5,5 | -   | 13   | Ø 0.2 | -    | 0.5  | steel     | -    | 20 |



### **EFFECTIVE**

The perforation of the linear element and support brackets ensures perfect ventilation over time, without the need for additional supports.

### **MATERIALS**

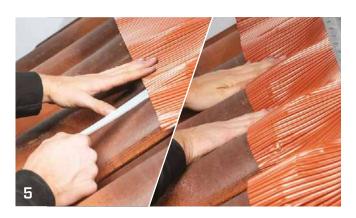
Stainless steel, pre-painted aluminium, butyl tape.

### RECOMMENDATIONS FOR INSTALLATION









## **PEAK ONE** VENTILATED UNDER-RIDGE FOR SINGLE PITCH

- 2 cm butyl tape
- High quality material
- For ventilation of pitches against a vertical wall



### **CODES AND DIMENSIONS**

| CODE       | B <sup>(1)</sup> | L   | B(1) | L    | material                                | colour                 | RAL              |   |
|------------|------------------|-----|------|------|---|------------------------|------------------|---|
|            | [mm]             | [m] | [in] | [ft] |   |                        |                  |   |
| PEAKONE165 | 165              | 1   | 6.5  | 3    | galvanized metal sheet<br>and aluminium | brown<br>and brick red | 8017 and<br>8004 | 3 |

(1) Aluminium strap length.

Waste classification (2014/955/EU): 17 04 07.

# RIDGE

### PEAK EASY

### VENTILATED RIGID RIDGE ROLL

### **DURABLE**

The choice of metal material ensures excellent UV stability even in harsh climate zones.

### **FAST INSTALLATION**

Quick and easy to install, it adapts to any ridge line.



### **TECHNICAL DATA**

| Properties                                   | value                         | USC conversion            |
|--|-------------------------------|---------------------------|
| Material                                     | aluminium, butyl              | -                         |
| Canopy width                                 | 160 mm                        | 6.3 in                    |
| Butyl tape width                             | 15 mm                         | 0.6 in                    |
| Air passage                                  | $> 230 \text{ cm}^2/\text{m}$ | 10.87 in <sup>2</sup> /ft |
| Strap elongation                             | 40%                           | -                         |
| Butyl thermal resistance                     | -30 / +80 °C                  | -22 / +176 °F             |
| Application temperature                      | +5 / +30 °C                   | +41 / +86 °F              |
| UV resistance                                | permanent                     | -                         |
| Water tightness (when installed under tiles) | conforming                    | -                         |
| Storage temperature                          | 0 / +25 °C                    | +32 / +77 °F              |

Waste classification (2014/955/EU): 17 09 04.

### **CODES AND DIMENSIONS**

| CODE        | В    | L   | В    | L    | colour    | RAL  |    |
|-------------|------|-----|------|------|-----------|------|----|
|             | [mm] | [m] | [in] | [ft] |           |      |    |
| PEAKEASY400 | 400  | 1   | 15.7 | 3    | brick red | 8004 | 20 |









### PEAK HOOK

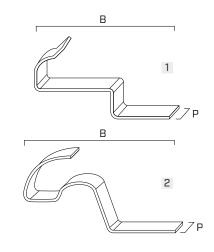
### RIDGE FASTENING HOOK FOR FLAT AND SHAPED TILES

### **FAST DRY INSTALLATION**

For installing the ridge without foam or mortar, in accordance with

### **COMPLETE RANGE**

Available in different versions and colours to suit different types of roofs.







### **CODES AND DIMENSIONS**

|   | CODE    | В    | Р    | В    | Р    | version   | material  | colour     | RAL  |    |
|---|---------|------|------|------|------|-----------|-----------|------------|------|----|
|   |         | [mm] | [mm] | [in] | [in] |           |           |            |      |    |
|   | PUNIRED | 115  | 18   | 4.5  | 0.7  | universal | aluminium | brick red  | 8004 | 50 |
| 1 | PUNIBRO | 115  | 18   | 4.5  | 0.7  | universal | aluminium | brown      | 8017 | 50 |
|   | PUNIANT | 115  | 18   | 4.5  | 0.7  | universal | aluminium | anthracite | 7021 | 50 |
|   | PCURRED | 80   | 18   | 3.2  | 0.7  | shaped    | aluminium | brick red  | 8004 | 50 |
| 2 | PCURBRO | 80   | 18   | 3.2  | 0.7  | shaped    | aluminium | brown      | 8017 | 50 |
|   | PCURANT | 80   | 18   | 3.2  | 0.7  | shaped    | aluminium | anthracite | 7021 | 50 |

Waste classification (2014/955/EU): 17 04 02.





### SUPPORT BATTEN

### METAL BATTEN-HOLDERS

### STABLE AND ADJUSTABLE

The different models are adjustable in height and available in various sizes to ensure the stability of the roof ridge without the need for foam or mortar.

### **4 VERSIONS**

Wide range with different fixing and adjustment methods depending on the type of ridge and the thickness to be compensated for by the batten.







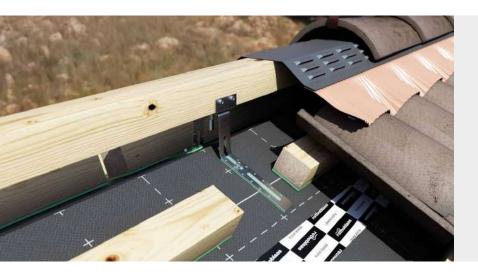


### **CODES AND DIMENSIONS**

|   | CODE         | H <sup>(1)</sup> | В    | H <sup>(1)</sup> | В    | version    | material    |    |
|---|--------------|------------------|------|------------------|------|------------|-------------|----|
|   |              | [mm]             | [mm] | [in]             | [in] |            |             |    |
| 1 | SUPPORTUNI   | 210              | 50   | 8.3              | 2.0  | universal  | DX51D steel | 50 |
| 2 | SUPPORTNAIL  | 280              | 50   | 11.0             | 2.0  | with nail  | DX51D steel | 50 |
| 3 | SUPPORTSCREW | 260              | 50   | 10.2             | 2.0  | with screw | DX51D steel | 50 |
| 4 | SUPPORTLEVEL | 210 - 240        | 50   | 8.3 - 9.5        | 2.0  | adjustable | DX51D steel | 50 |

<sup>(1)</sup> Total height.

Waste classification (2014/955/EU): 17 04 05.



### **VERSATILE**

It can be adapted to any type of roof and be fixed on the most common rigid supports such as wood or concrete.

### **MATERIAL**

Made of steel for perfect durability and weather resistance.

### RECOMMENDATIONS FOR INSTALLATION

### 1 SUPPORTUNI





2 SUPPORTNAIL





3 SUPPORTSCREW





4 SUPPORTLEVEL





# CHIMNEY CONNECTION

### **ALU FLASH CONNECT**

### ALUMINIUM AND SELF-ADHESIVE BUTYL VERSION

- Butyl adhesive adheres perfectly, creating a durable watertight seal
- It can be cut with a cutter or scissors
- Excellent UV and weather resistance



| CODE       | В    | s    | L   | В    | S     | L     | cladding          | colour    | RAL  |   |
|------------|------|------|-----|------|-------|-------|-------------------|-----------|------|---|
|            | [mm] | [mm] | [m] | [in] | [mil] | [ft]  |                   |           |      |   |
| ALURRED300 | 300  | 2    | 5   | 11.8 | 79    | 16.40 | aluminium 0,12 mm | brick red | 8004 | 1 |
| ALURBRO300 | 300  | 2    | 5   | 11.8 | 79    | 16.40 | aluminium 0,12 mm | brown     | 8019 | 1 |
| ALURBLA300 | 300  | 2    | 5   | 11.8 | 79    | 16.40 | aluminium 0,12 mm | black     | 9004 | 1 |

Waste classification (2014/955/EU): 17 09 04.

### SOFT FLASH CONNECT

### EPDM AND BUTYL SELF-ADHESIVE VERSION

- Permanent UV stability
- Extremely flexible 3D surface
- It can be modelled by hand without special tools



| CODE        | В    | s    | L   | В    | S     | L     | cladding    | colour    | RAL  |   |
|-------------|------|------|-----|------|-------|-------|-------------|-----------|------|---|
|             | [mm] | [mm] | [m] | [in] | [mil] | [ft]  |             |           |      |   |
| SOFTRRED300 | 300  | 2,5  | 5   | 11.8 | 98    | 16.40 | EPDM 1,5 mm | brick red | 8004 | 1 |
| SOFTRBRO300 | 300  | 2,5  | 5   | 11.8 | 98    | 16.40 | EPDM 1,5 mm | brown     | 8019 | 1 |
| SOFTRBLA300 | 300  | 2,5  | 5   | 11.8 | 98    | 16.40 | EPDM 1,5 mm | black     | 9004 | 1 |

Waste classification (2014/955/EU): 17 02 03.

### **MANICA ROLL**

### SELF-ADHESIVE LEAD AND BUTYL VERSION

- Smooth, perfectly malleable surface
- Permanent UV stability
- Excellent weather resistance



| CODE     | В    | s    | L   | В    | S     | L     | cladding    | colour     | RAL  |   |
|----------|------|------|-----|------|-------|-------|-------------|------------|------|---|
|          | [mm] | [mm] | [m] | [in] | [mil] | [ft]  |             |            |      |   |
| MANROLL1 | 300  | 1,5  | 5   | 11.8 | 59    | 16.40 | lead 0,5 mm | brick red  | 8004 | 1 |
| MANROLL2 | 300  | 1,5  | 5   | 11.8 | 59    | 16.40 | lead 0,5 mm | brown      | 8017 | 1 |
| MANROLL3 | 300  | 1,5  | 5   | 11.8 | 59    | 16.40 | lead 0,5 mm | dark brown | 8019 | 1 |
| MANROLL4 | 300  | 1,5  | 5   | 11.8 | 59    | 16.40 | lead 0,5 mm | black      | 9005 | 1 |
| MANROLL5 | 300  | 1,5  | 5   | 11.8 | 59    | 16.40 | lead 0,5 mm | graphite   | 7016 | 1 |

Avoid contact with skin, eyes and food. Do not produce and breathe dust.

### RECOMMENDATIONS FOR INSTALLATION







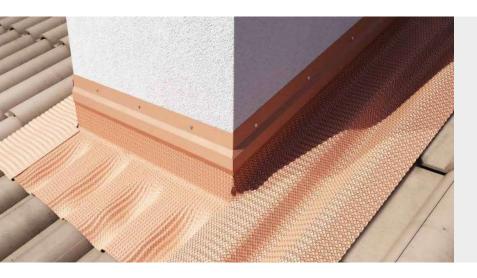


# **GUTTER** FLASHING

- Cold and water resistant
- Resistant to UV rays
- With polyester paint, protected by protective film

| CODE                    | В    | L   | В    | L    | material  | colour    | RAL  |    |
|-------------------------|------|-----|------|------|-----------|-----------|------|----|
|                         | [mm] | [m] | [in] | [ft] |           |           |      |    |
| GUTRED80 <sup>(1)</sup> | 80   | 2   | 3.1  | 7    | aluminium | brick red | 8004 | 20 |
| GUTBRO80(1)             | 80   | 2   | 3.1  | 7    | aluminium | brown     | 8019 | 20 |
| GUTBLA80(1)             | 80   | 2   | 3.1  | 7    | aluminium | black     | 9005 | 20 |

(1)Products available only upon order. Waste classification (2014/955/EU): 17 04 02.



### **ADJUSTABLE**

The special adhesive butyl mix offers strong adherence, even on rough surfaces.

### **MATERIAL**

Aluminium, EPDM and lead guarantee durability.

# **EAVES GUTTER**

### **VALLEY ALU**

### STRENGTHENING ELEMENT FOR VALLEYS

- Quick and easy installation
- Weather resistance



### **CODES AND DIMENSIONS**

| CODE         | В    | L   | В    | L    | colour    | RAL  |   |
|--------------|------|-----|------|------|-----------|------|---|
|              | [mm] | [m] | [in] | [ft] |           |      |   |
| VALLEYRED500 | 500  | 6   | 19.7 | 20   | brick red | 8004 | 1 |
| VALLEYBRO500 | 500  | 6   | 19.7 | 20   | brown     | 8017 | 1 |

Waste classification (2014/955/EU): 17 04 05.

## GASKET

### **GASKET FOR VALLEY**

- Made of polyurethane foam
- Self-adhesive, ideal for quick installation
- Adapts to all roof shapes for optimal and permanent watertightness



### **CODES AND DIMENSIONS**

| CODE        | В    | Н    | L   | В    | Н    | L    | colour     | RAL  |     |
|-------------|------|------|-----|------|------|------|------------|------|-----|
|             | [mm] | [mm] | [m] | [in] | [in] | [ft] |            |      |     |
| GASKETANT60 | 30   | 60   | 1   | 1.2  | 2.4  | 3    | anthracite | 7021 | 200 |

Waste classification (2014/955/EU): 17 02 03.



### **COMPLETE SYSTEM**

The VALLEY ALU and GASKET solution provides excellent and durable protection of the valley.

### **MATERIAL**

Made of aluminium, it provides safe and durable protection.

# **SNOW PROTECTION**

# SNOW STOP

# SNOW STOPPER HOOK FOR RIDGE TILES AND TILES

# **STABLE**

Stable mechanical fixing prevents accumulated snow falls.

# **COMPLETE RANGE**

Available for ridge, Marseille and Portuguese type tiles in different colours.



# **CODES AND DIMENSIONS**

| CODE         | Н    | В    | Р    | Н    | В    | Р    | version                         | material                   | colour    | RAL  |     |
|--------------|------|------|------|------|------|------|---------------------------------|----------------------------|-----------|------|-----|
|              | [mm] | [mm] | [mm] | [in] | [in] | [in] |                                 |                            |           |      |     |
| SSTOPREDUNI  | 65   | 300  | 30   | 2.6  | 11.8 | 1.2  | cement and<br>roof tile         | pre-painted<br>metal sheet | brick red | 8004 | 40  |
| SSTOPBROUNI  | 65   | 300  | 30   | 2.6  | 11.8 | 1.2  | cement and roof tile            | pre-painted<br>metal sheet | brown     | 8017 | 40  |
| SSTOPREDPOR  | 65   | 300  | 30   | 2.6  | 11.8 | 1.2  | Portuguese<br>roof tile         | pre-painted<br>metal sheet | brick red | 8004 | 40  |
| SSTOPBROPOR  | 65   | 300  | 30   | 2.6  | 11.8 | 1.2  | Portuguese<br>roof tile         | pre-painted<br>metal sheet | brown     | 8017 | 40  |
| SSTOPREDFLAT | 65   | 280  | 30   | 2.6  | 11.0 | 1.2  | Canadian tile,<br>metal roofing | pre-painted<br>metal sheet | brick red | 8004 | 40  |
| SSTOPBROFLAT | 65   | 280  | 30   | 2.6  | 11.0 | 1.18 | Canadian tile,<br>metal roofing | pre-painted<br>metal sheet | brown     | 8017 | 40  |
| SSTOPLBRO    | 55   | 130  | 40   | 2.17 | 5.1  | 1.6  | tile                            | pre-painted<br>metal sheet | brown     | 8017 | 200 |
| SSTOPLCOP    | 55   | 130  | 40   | 2.17 | 5.1  | 1.6  | tile                            | stainless steel            | copper    | -    | 200 |

Waste classification (2014/955/EU): 17 04 05.

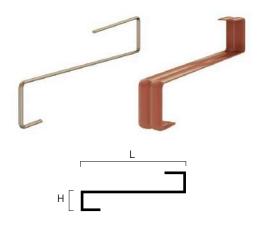




# I TILE STOP S

# S PRE-SHAPED HOOKS FOR PLAIN TILES

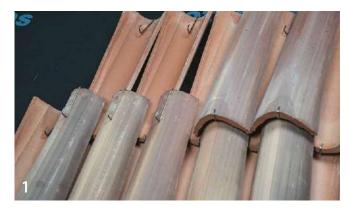
- Prevents roof from slipping
- Dry installation
- Fast and safe interlocking
- Installation with foam or mortar is avoided in compliance with standard UNI 9460
- Wide range of materials and sizes available



# **CODES AND DIMENSIONS**

| CODE        | L    | Н    | L    | Н    | material                | colour    | RAL  |     |
|-------------|------|------|------|------|-------------------------|-----------|------|-----|
|             | [mm] | [mm] | [in] | [in] |                         |           |      |     |
| TSSI9016    | 90   | 16   | 3.5  | 0.6  | steel AISI 204          | steel     | -    | 100 |
| TSS19020    | 90   | 20   | 3.5  | 0.8  | steel AISI 204          | steel     | -    | 100 |
| TSSI12016   | 120  | 16   | 4.7  | 0.6  | steel AISI 204          | steel     | -    | 50  |
| TSSI12020   | 120  | 20   | 4.7  | 0.8  | steel AISI 204          | steel     | -    | 50  |
| TSSRED9016  | 90   | 16   | 3.5  | 0.6  | pre-painted metal sheet | Siena red | 3009 | 50  |
| TSSRED9020  | 90   | 20   | 3.5  | 0.8  | pre-painted metal sheet | Siena red | 3009 | 50  |
| TSSRED12016 | 120  | 16   | 4.7  | 0.6  | pre-painted metal sheet | Siena red | 3009 | 50  |
| TSSRED12020 | 120  | 20   | 4.7  | 0.8  | pre-painted metal sheet | Siena red | 3009 | 50  |
| TSSBRO9016  | 90   | 16   | 3.5  | 0.6  | pre-painted metal sheet | brown     | 8019 | 50  |
| TSSBRO9020  | 90   | 20   | 3.5  | 0.8  | pre-painted metal sheet | brown     | 8019 | 50  |
| TSSCOP9016  | 90   | 16   | 3.5  | 0.6  | stainless steel tape    | copper    | -    | 50  |
| TSSCOP9020  | 90   | 20   | 3.5  | 0.8  | stainless steel tape    | copper    | -    | 50  |

Waste classification (2014/955/EU): 17 04 05.



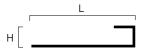


# I TILE STOP L

# L PRE-SHAPED HOOKS FOR PLAIN TILES

- Dry installation
- Tough and secure hold for the first row of tiles on the pitch
- They can be used as mullion hooks on which the weight Sof the upper rows of tiles can be unloaded
- Installation with foam or mortar is avoided in compliance with standard UNI 9460
- Wide range of materials and sizes available





# **CODES AND DIMENSIONS**

| CODE        | L    | Н    | L    | Н    | material                | colour    | RAL  |     |
|-------------|------|------|------|------|-------------------------|-----------|------|-----|
|             | [mm] | [mm] | [in] | [in] |                         |           |      |     |
| TSLI28016   | 280  | 16   | 11.0 | 0.6  | steel AISI 204          | steel     | -    | 200 |
| TSL128020   | 280  | 20   | 11.0 | 0.8  | steel AISI 204          | steel     | -    | 200 |
| TSLRED28016 | 280  | 16   | 11.0 | 0.6  | pre-painted metal sheet | Siena red | 3009 | 200 |
| TSLRED28020 | 280  | 20   | 11.0 | 0.8  | pre-painted metal sheet | Siena red | 3009 | 200 |
| TSLBRO28016 | 280  | 16   | 11.0 | 0.6  | pre-painted metal sheet | brown     | 8019 | 200 |
| TSLBRO28020 | 280  | 20   | 11.0 | 0.8  | pre-painted metal sheet | brown     | 8019 | 200 |
| TSLCOP28016 | 280  | 16   | 11.0 | 0.6  | stainless steel tape    | copper    | -    | 200 |
| TSLCOP28020 | 280  | 20   | 11.0 | 0.8  | stainless steel tape    | copper    | -    | 200 |

Waste classification (2014/955/EU): 17 04 05.

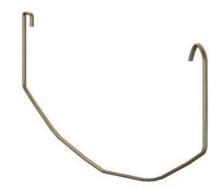




# I TILE STOP WIND

# PRE-SHAPED BRACING HOOKS FOR TILES

- They prevent tiles from tipping over in the event of wind
- They ensure maximum stability of the roof covering
- Installation with foam or mortar is avoided in compliance with standard UNI 9460



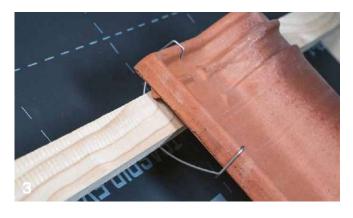
# **CODES AND DIMENSIONS**

| CODE   | version  | material          | colour |    |
|--------|----------|-------------------|--------|----|
| TSWIND | per tile | zinc-plated steel | steel  | 50 |

Waste classification (2014/955/EU): 17 04 05.









# I TILE STOP WIND COPPO

# PRE-SHAPED BRACING HOOKS FOR RIDGE TILES

- They prevent bent tiles from tipping over in the event of wind
- They ensure maximum stability of the roof covering
- Installation with foam or mortar is avoided in compliance with standard UNI 9460

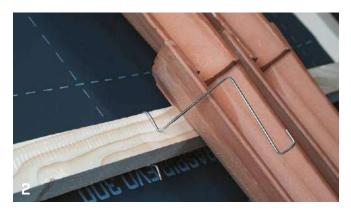


# **CODES AND DIMENSIONS**

| CODE    | version                | material       | colour |     |
|---------|------------------------|----------------|--------|-----|
| TSWINDC | for tiles without hole | steel AISI 204 | steel  | 200 |

Waste classification (2014/955/EU): 17 04 05.









# **VENTILATION AND PROTECTION**

# VENT MESH

# FLEXIBLE VENTILATION GRID

- Available in different heights and materials
- Available in different colour variations
- It prevents the entry of birds and insects allowing continuous ventilation



# **CODES AND DIMENSIONS**

| CODE                      | Н    | L   | Н    | L    | material                | colour            | RAL       |   |
|---------------------------|------|-----|------|------|-------------------------|-------------------|-----------|---|
|                           | [mm] | [m] | [in] | [ft] |                         |                   |           |   |
| VENTREDBRO80              | 80   | 5   | 3.2  | 16   | pre-painted metal sheet | brick red / brown | 8004/8017 | 1 |
| VENTREDBLA80              | 80   | 5   | 3.2  | 16   | pre-painted metal sheet | brick red/black   | 8004/9005 | 1 |
| VENTCOP80                 | 80   | 25  | 3.2  | 82   | aluminium               | copper            | -         | 1 |
| VENTREDBRO100             | 100  | 5   | 3.9  | 16   | pre-painted metal sheet | brick red / brown | 8004/8017 | 1 |
| VENTREDBLA100             | 100  | 5   | 3.9  | 16   | pre-painted metal sheet | brick red/black   | 8004/9005 | 1 |
| VENTCOP100                | 100  | 25  | 3.9  | 82   | aluminium               | copper            | -         | 1 |
| VENTREDBRO120             | 120  | 5   | 4.7  | 16   | pre-painted metal sheet | brick red / brown | 8004/8017 | 1 |
| VENTREDBLA120             | 120  | 5   | 4.7  | 16   | pre-painted metal sheet | brick red/black   | 8004/9005 | 1 |
| VENTCOP120                | 120  | 25  | 4.7  | 82   | aluminium               | copper            | -         | 1 |
| VENTREDBRO160(1)          | 160  | 5   | 6.3  | 16   | pre-painted metal sheet | brick red / brown | 8004/8017 | 1 |
| VENTREDBLA160(1)          | 160  | 5   | 6.3  | 16   | pre-painted metal sheet | brick red/black   | 8004/9005 | 1 |
| VENTCOP160 <sup>(1)</sup> | 160  | 25  | 6.3  | 82   | aluminium               | copper            | -         | 1 |

 $<sup>{}^{(1)}\</sup>mbox{Products}$  available only upon order.

Waste classification (2014/955/EU): 17 04 02 (aluminium), 17 04 05 (metal sheet).

# **VENT GRILLE**

# **PVC VENTILATION GRID**

- Made of extremely weatherproof, impact and UV resistant material
- It protects the air entry section from animals and insects that might obstruct it



# **CODES AND DIMENSIONS**

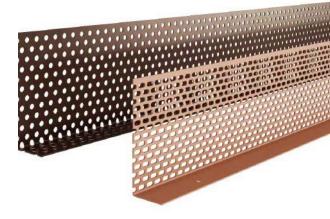
| CODE      | Н    | L   | Н    | L    | material | colour    | RAL  |    |
|-----------|------|-----|------|------|----------|-----------|------|----|
|           | [mm] | [m] | [in] | [ft] |          |           |      |    |
| VENTG80R  | 80   | 5   | 3.2  | 16   | PVC      | brick red | 8004 | 24 |
| VENTG80B  | 80   | 5   | 3.2  | 16   | PVC      | black     | 9005 | 24 |
| VENTG100R | 100  | 5   | 3.9  | 16   | PVC      | brick red | 8004 | 24 |
| VENTG100B | 100  | 5   | 3.9  | 16   | PVC      | black     | 9005 | 24 |

Waste classification (2014/955/EU): 17 02 03.

# **VENT FOLD**

# PRE-BENT GRID FOR VENTILATION

- Large air entry
- Easy installation thanks to the support foot
- Extremely weather resistant



# **CODES AND DIMENSIONS**

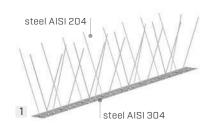
| CODE          | Н    | В    | L   | Н    | В    | L    | material                   | colour    | RAL  |    |
|---------------|------|------|-----|------|------|------|----------------------------|-----------|------|----|
|               | [mm] | [mm] | [m] | [in] | [in] | [ft] |                            |           |      |    |
| VENTFSRED7030 | 70   | 30   | 1,5 | 2.8  | 1.2  | 5    | pre-painted metal<br>sheet | brick red | 8004 | 10 |
| VENTFSBRO7030 | 70   | 30   | 1,5 | 2.8  | 1.2  | 5    | pre-painted metal<br>sheet | brown     | 8017 | 10 |
| VENTFSRED9030 | 90   | 30   | 1,5 | 3.5  | 1.2  | 5    | pre-painted metal<br>sheet | brick red | 8004 | 10 |
| VENTFSBRO9030 | 90   | 30   | 1,5 | 3.5  | 1.2  | 5    | pre-painted metal<br>sheet | brown     | 8017 | 10 |
| VENTFPRED7030 | 70   | 30   | 2,5 | 2.8  | 1.2  | 8    | PP                         | brick red | 8004 | 20 |
| VENTFPBRO7030 | 70   | 30   | 2,5 | 2.8  | 1.2  | 8    | PP                         | brown     | 8017 | 20 |
| VENTFPRED9030 | 90   | 30   | 2,5 | 3.54 | 1.2  | 8    | PP                         | brick red | 8004 | 20 |
| VENTFPBRO9030 | 90   | 30   | 2,5 | 3.54 | 1.2  | 8    | PP                         | brown     | 8017 | 20 |

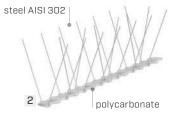
Waste classification (2014/955/EU): 17 02 03 (PP), 17 04 05 (metal sheet).

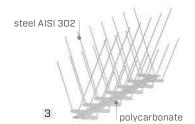
# **BIRD SPIKE**

# RIGID BIRD SPIKES

• Element made up of a steel or polycarbonate base with stainless steel spikes fixed to the base to prevent birds from stopping on place







# **CODES AND DIMENSIONS**

|   | CODE        | В    | Н    | L    | В    | Н    | L     | version |     |
|---|-------------|------|------|------|------|------|-------|---------|-----|
|   |             | [mm] | [mm] | [mm] | [in] | [in] | [in]  |         |     |
| 1 | BIRDSPIKE   | 60   | 110  | 1000 | 2.4  | 4.33 | 3280  | single  | 25  |
| 2 | BIRDSPIKEP1 | 60   | 110  | 335  | 2.4  | 4.33 | 13.19 | single  | 150 |
| 3 | BIRDSPIKEP2 | 90   | 110  | 335  | 3.54 | 4.33 | 13.19 | double  | 150 |

Waste classification (2014/955/EU): 17 09 04 (polycarbonate+ steel), 17 04 05 (steel).

# **VENTILATION AND PROTECTION**

# BIRD COMB

# STANDARD EAVES BIRD COMBS

# **ADJUSTABLE**

The flexible polymer compound screens adapt to the profile of the final roof covering.

# **WIDE RANGE**

It can be supplied in different colours and heights to meet different application needs. Also available in a version with a raised base to avoid the first eaves batten.





# **CODES AND DIMENSIONS**

|   | CODE        | Н    | L   | Н    | L    | version                       | material | colour    | RAL  |     |
|---|-------------|------|-----|------|------|-------------------------------|----------|-----------|------|-----|
|   |             | [mm] | [m] | [in] | [ft] |                               |          |           |      |     |
|   | BIRDRED60   | 60   | 1   | 2.4  | 3    | without ventilation batten    | PP       | brick red | 8004 | 200 |
|   | BIRDBRO60   | 60   | 1   | 2.4  | 3    | without ventilation batten    | PP       | brown     | 8019 | 200 |
| 1 | BIRDBLA60   | 60   | 1   | 2.4  | 3    | without ventilation batten    | PP       | black     | 9005 | 200 |
| ' | BIRDRED100  | 100  | 1   | 3.9  | 3    | without ventilation batten    | PP       | brick red | 8004 | 300 |
|   | BIRDBRO100  | 100  | 1   | 3.9  | 3    | without ventilation batten    | PP       | brown     | 8019 | 300 |
|   | BIRDBLA100  | 100  | 1   | 3.9  | 3    | without ventilation batten    | PP       | black     | 9005 | 300 |
|   | BIRDRED6025 | 85   | 1   | 3.4  | 3    | with 25 mm ventilation batten | PP       | brick red | 8004 | 50  |
| 2 | BIRDBRO6025 | 85   | 1   | 3.4  | 3    | with 25 mm ventilation batten | PP       | brown     | 8019 | 50  |
|   | BIRDBLA6025 | 85   | 1   | 3.4  | 3    | with 25 mm ventilation batten | PP       | black     | 9005 | 50  |

Waste classification (2014/955/EU): 17 02 03.



# **VERSATILE**

It can be used in combination with all types of tiles and ridge tiles, thanks to its ability to adapt to the different shapes of the roof elements.

# **MATERIAL**

Made of high quality polypropylene, weatherproof, impact and UV resistant.

# ■ BIRD COMB EVO

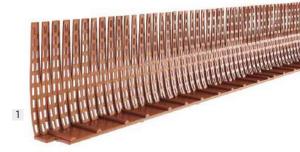
# TWIN ROW EAVES BIRD COMB

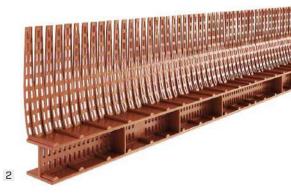
# MAXIMUM EFFICIENCY

Advanced eaves bird comb with twin row of perforated teeth to guarantee the maximum passage of air and secure protection against the entrance of birds.

# **VERSATILE**

Also available in the version with raised base to increase the support thickness of the last row of tiles, aligning it with the slope of the roof.





# **CODES AND DIMENSIONS**

|   | CODE          | Н    | L   | Н    | L    | version                       | material | colour    | RAL  |     |
|---|---------------|------|-----|------|------|-------------------------------|----------|-----------|------|-----|
|   |               | [mm] | [m] | [in] | [ft] |                               |          |           |      |     |
|   | BIRDERED70    | 70   | 1   | 2.8  | 3    | without ventilation batten    | PP       | brick red | 2001 | 100 |
| 1 | BIRDEBRO70    | 70   | 1   | 2.8  | 3    | without ventilation batten    | PP       | brown     | 8019 | 100 |
| ı | BIRDERED110   | 110  | 1   | 4.3  | 3    | without ventilation batten    | PP       | brick red | 2001 | 60  |
|   | BIRDEBRO110   | 110  | 1   | 4.3  | 3    | without ventilation batten    | PP       | brown     | 8019 | 60  |
| _ | BIRDERED7025  | 90   | 1   | 3.5  | 3    | with 25 mm ventilation batten | PP       | brick red | 2001 | 35  |
| 2 | BIRDERED11025 | 130  | 1   | 5.1  | 3    | with 25 mm ventilation batten | PP       | brick red | 2001 | 25  |

Waste classification (2014/955/EU): 17 02 03.



# STABLE OVER TIME

The polymeric compound ensures good stability over time, guaranteeing the protective function of the ventilation.

# **MATERIAL**

Made of high quality polypropylene, weatherproof, impact and UV resistant.

# **VENTILATION AND PROTECTION**

# **VENT SHAPE**

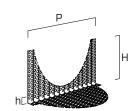
# VENTILATION GRID FOR ROOFS MADE OF TILES OF **VARIOUS SHAPE**

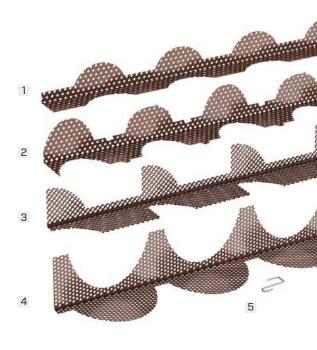
# **DURABILITY**

Made of metal sheet, it is resistant and perfectly weatherproof.

# **FAST INSTALLATION**

Pre-bending and shaping during production makes installation immediate, without the need for additional supports.





# **CODES AND DIMENSIONS**

| CODE           | Н    | h    | Р    | L    | Н    | h    | Р    | L    | version                           | material                  | colour | RAL  |    |
|----------------|------|------|------|------|------|------|------|------|-----------------------------------|---------------------------|--------|------|----|
|                | [mm] | [mm] | [mm] | [mm] | [in] | [in] | [in] | [in] |                                   |                           |        |      |    |
| 1 VENTSBRO9015 | 90   | 15   | 195  | 975  | 3.5  | 0.6  | 7.7  | 38.4 | for ridge tile                    | perforated<br>metal sheet | brown  | 8017 | 10 |
| 2 VENTSBRO7519 | 75   | 19   | 200  | 1000 | 3.0  | 0.8  | 7.9  | 39.4 | for Portuguese<br>roof tiles      | expanded<br>metal sheet   | brown  | 8017 | 10 |
| 3 VENTSBRO4520 | 45   | 20   | 300  | 900  | 1.8  | 0.8  | 11.8 | 35.4 | for concrete<br>French roof tiles | perforated<br>metal sheet | brown  | 8017 | 10 |
| 4 VENTSBRO7020 | 70   | 20   | 300  | 900  | 2.8  | 0.8  | 11.8 | 35.4 | for concrete<br>Greek roof tile   | perforated<br>metal sheet | brown  | 8017 | 10 |

Other versions and dimensions are available on request.

Waste classification (2014/955/EU): 17 04 05.

| CODE        | L    | Н    | L    | Н    | version        | material                 | colour |     |
|-------------|------|------|------|------|----------------|--------------------------|--------|-----|
|             | [mm] | [mm] | [in] | [in] |                |                          |        |     |
| 5 VENTSHOOK | 50   | 20   | 2.0  | 0.8  | for ridge tile | stainless steel<br>strap | steel  | 100 |



# **UV STABILITY**

The choice of metal material ensures excellent UV stability even in harsh climate zones.

# **SAFETY**

They allow under-tile micro-ventilation, protecting the roof from the entry of leaves and animals.

# RECOMMENDATIONS FOR INSTALLATION









# RAIN TUBE

# TEMPORARY DOWNPIPE FOR CONSTRUCTION SITE **PHASES**

- It protects building façades during construction or renovation work
- Versatile, easy-to-use solution



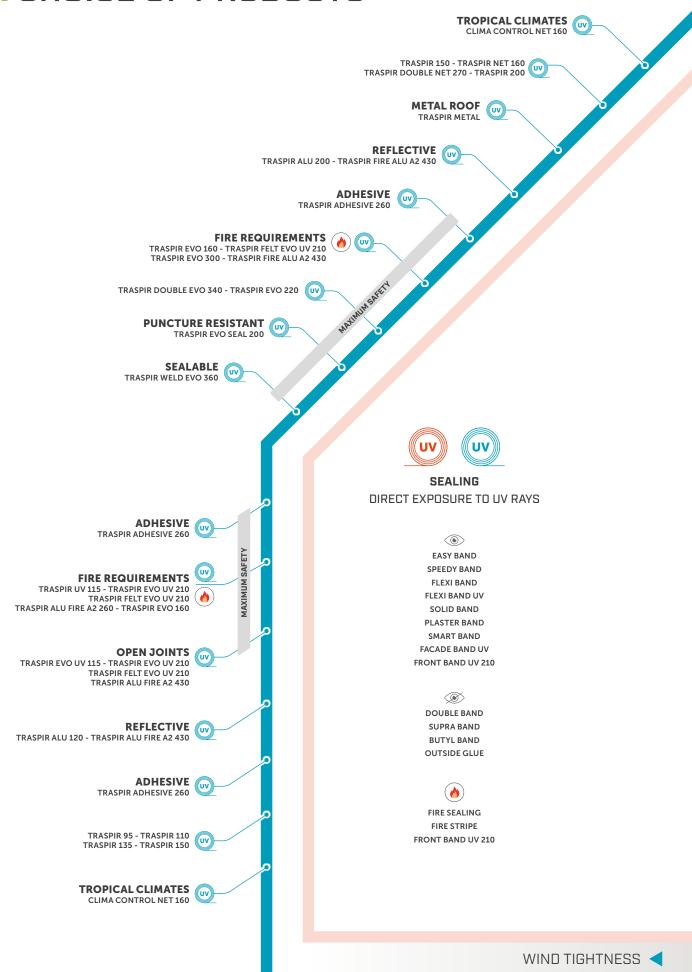


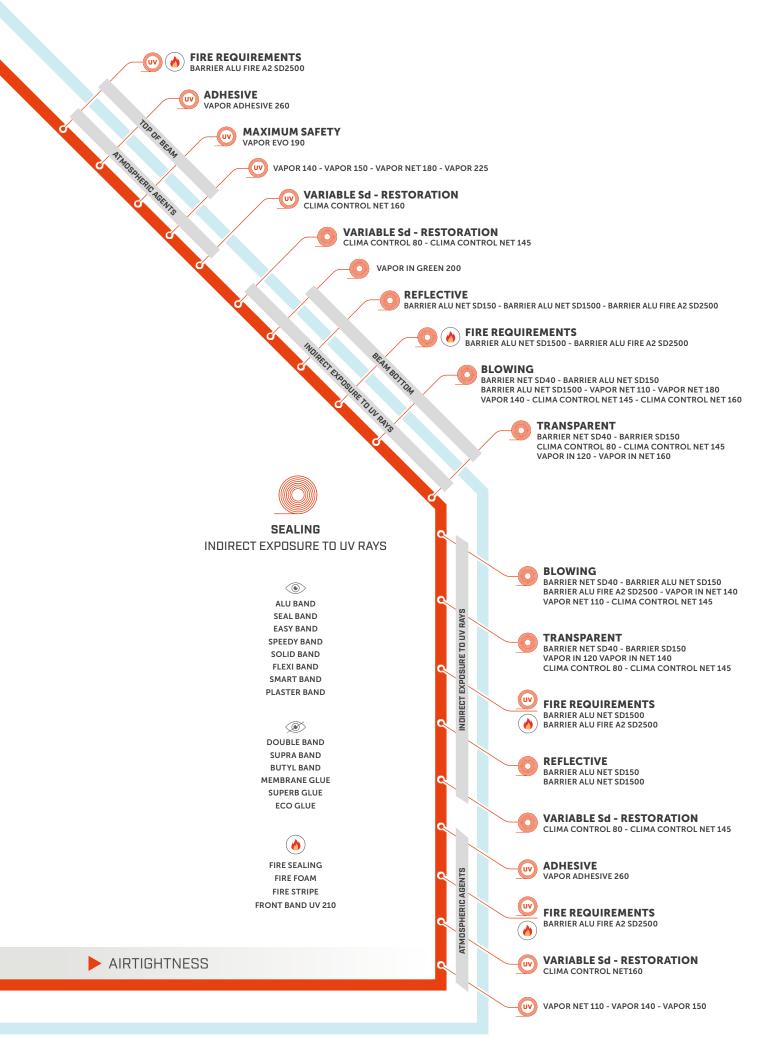
# **CODES AND DIMENSIONS**

| CODE     | d    | L   | d    | L    | material | colour      |   |
|----------|------|-----|------|------|----------|-------------|---|
|          | [mm] | [m] | [in] | [ft] |          |             |   |
| RTUBE200 | 200  | 200 | 7.9  | 656  | PVC      | transparent | 1 |

Waste classification (2014/955/EU): 17 02 03.

# I CHOICE OF PRODUCTS





# BREATHABLE AND VAPOUR CONTROL **SCREENS**

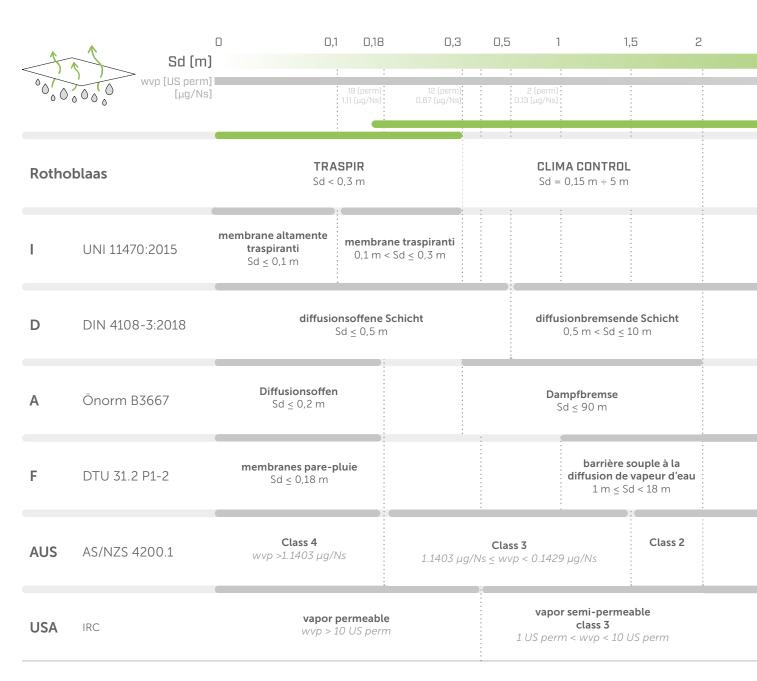
# RESISTANCE TO PENETRATION OF WATER VAPOUR

The main parameter that defines the type of membrane is its resistance to penetration of water vapour value, identified with Sd (m).

Sd (m): equivalent air layer, as it is a measure of the thickness of air that would offer the same resistance as the product or structure in question to the passage of vapour (by diffusion).

Another parameter describing the water vapour diffusion capacity of products is the water vapour permeability and can be expressed in US perm,  $\mu g/Ns$  and g/m<sup>2</sup>24h.

The membranes classification is not defined by a single standard but is determined by different national standards in different ways depending on their Sd value. For this reason, finding a single definition valid for all countries is not possible.

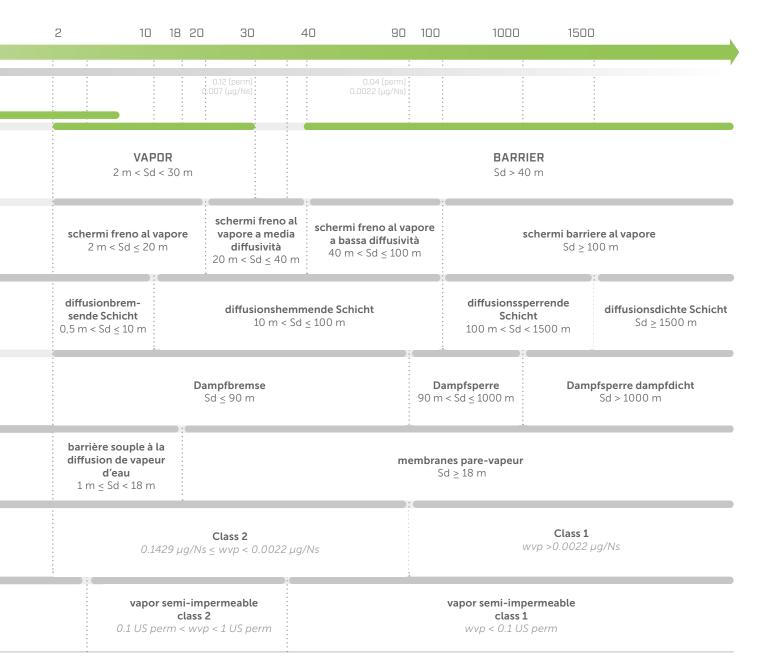


# BREATHABLE AND VAPOUR CONTROL MEMBRANES CLASSIFICATION

Membranes can be grouped into 3 categories, based on their characteristics:

|                          | AIRTIGHTNESS | WATERTIGHTNESS | RESISTANCE TO<br>WATER VAPOUR |
|--------------------------|--------------|----------------|-------------------------------|
| Vapour barriers          | •••          | • • •          | • • •                         |
| Vapour control membranes | •••          | •••            | •••                           |
| Breathable membranes     | • • •        | •••            | 000                           |

The properties described here, together with other parameters mentioned in the technical data sheets, are regulated by the CE marking protocol for vapour control membranes (EN 13984), underlays for discontinuous roofing (EN 13859-1) and wall underlays (EN 13859-2).



# MEMBRANEPERFORMANCE

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.

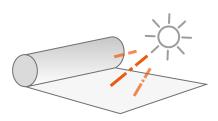
Passing this test is not sufficient to make the products suitable to replace the sealing layer and to withstand standing water for long periods.

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 "conforming" 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



Is the value relative to annual median radiation in the Central Europe zone, formulated based on EN 13859-1/2 (55 MJ/m<sup>2</sup>).

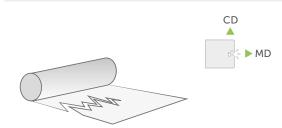
Thetestmethodconsists of exposing the specimens to continuous UV irradiationatelevated temperature for 336 hours. This corresponds to a total UV radiation exposure of 55 MJ/m<sup>2</sup>.

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.

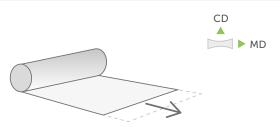
Note: actual climatic conditions are variable and depend on the application context, so it is difficult to establish an exact match between artificial ageing tests and actual conditions.

# **TENSILE STRENGTH**



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

# **ELONGATION**



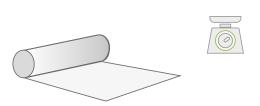
Indicates the maximum elongation percentage the product can suffer before failure.

# 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).

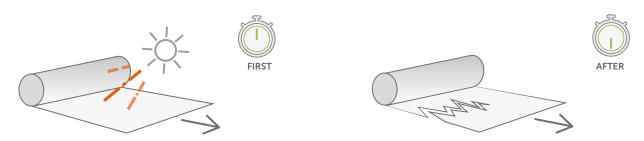
# MASS PER UNIT AREA



Mass per unit area expressed in g/m<sup>2</sup>. 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

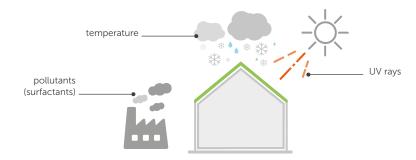
# DURABILITY



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 expected from accelerated laboratory ageing data is a reliable indication of the relative strength ranking of a material compared to other 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.











**PRODUCT ORIENTATION** 

**LATITUDE** 

**ALTITUDE** 

YEARLY RANDOM **VARIATIONS IN TIME** 

# **I MEMBRANES PROPERTIES**

|  |   |                    |                  | BA            | RRII                  | ER                     |                            |              |                  |                    | CI               | IMA                   | CON                   | ITRO          | DL &         | VAP        | DR            |               |              |                    |
|--|---|--------------------|------------------|---------------|-----------------------|------------------------|----------------------------|--------------|------------------|--------------------|------------------|-----------------------|-----------------------|---------------|--------------|------------|---------------|---------------|--------------|--------------------|
|  |   |                    | BARRIER NET SD40 | BARRIER SD150 | BARRIER ALU NET SD150 | BARRIER ALU NET SD1500 | BARRIER ALU FIRE A2 SD2500 | VAPOR IN 120 | VAPOR IN NET 140 | VAPOR IN GREEN 200 | CLIMA CONTROL 80 | CLIMA CONTROL NET 145 | CLIMA CONTROL NET 160 | VAPOR NET 110 | VAPOR 140    | VAPOR 150  | VAPOR NET 180 | VAPOR EVO 190 | VAPOR 225    | VAPOR ADHESIVE 260 |
| Monolithic/Evo                           |   |                    |                  |               |                       |                        |                            |              |                  |                    | <b>V</b>         | <b>V</b>              | <b>V</b>              |               |              |            |               | <b>V</b>      |              |                    |
| Microporous/Stand                        | dard                                      |                    | ✓                | <b>✓</b>      | ✓                     | ✓                      | <b>✓</b>                   | <b>✓</b>     | ✓                | <b>✓</b>           |                  |                       |                       | ✓             | ✓            | ✓          | ✓             |               | ✓            | <b>✓</b>           |
| Bituminous                               |   |                    |                  |               |                       |                        |                            |              |                  |                    |                  |                       |                       |               |              |            |               |               |              |                    |
| Reinforcing grid                         |   |                    | <b>V</b>         |               | <b>V</b>              | <b>V</b>               |                            |              | <b>V</b>         | ✓                  |                  | <b>V</b>              | <b>V</b>              | <b>V</b>      |              |            | <b>V</b>      |               |              |                    |
| Variable Sd                              |   |                    |                  |               |                       |                        |                            |              |                  |                    | <b>V</b>         | <b>V</b>              | <b>✓</b>              |               |              |            |               |               |              |                    |
| Reflective                               |   |                    |                  |               | ✓                     | <b>V</b>               | <b>V</b>                   |              |                  |                    |                  |                       |                       |               |              |            |               |               |              |                    |
| Self-adhesive                            |   |                    |                  |               |                       |                        |                            |              |                  |                    |                  |                       |                       |               |              |            |               |               |              | <b>✓</b>           |
| Permanent UV stab<br>(see product data s |   |                    |                  |               |                       |                        |                            |              |                  |                    |                  |                       |                       |               |              |            |               |               |              |                    |
|  | ass per unit area<br>N 1849]              | g/m <sup>2</sup>   | 110              | 190           | 100                   | 200                    | 140                        | 120          | 140              | 200                | 80               | 145                   | 160                   | 110           | 140          | 150        | 180           | 190           | 225          | 260                |
|  |   | oz/ft <sup>2</sup> | 0.36             | 0.62          | 0.33                  | 0.66                   | 0.46                       | 0.39         | 0.46             | 0.66               | 0.26             | 0.48                  | 0.52                  | 0.36          | 0.46         | 0.49       | 0.59          | 0.62          | 0.74         | 0.85               |
| tra                                      | ater vapour<br>ansmission (Sd)<br>N 1931] | m                  | 40               | 145           | 150                   | 4000                   | 2500                       | 30           | 30               | 7                  | 5                | 0,15                  | 0,5<br>5              | 5             | 10           | 13         | 10            | 5             | 4            | 19                 |
|  |   | US perm            | 0.087            | 0.024         | 0.023                 | 0.001                  | 0.001                      | 0.140        | 0.140            | 0.500              | 23<br>0.7        | 23<br>0.7             | 7   0.7               | 0.70          | 0.350        | 0.269      | 0.350         | 0.70          | 0.874        | 0.184              |
|  | eaction to fire<br>N 13501-1]             | steel              | F                | Е             | Е                     | B-s1,d0                | A2-s1,d0                   | E            | Е                | E                  | Е                | Е                     | E                     | Е             | F            | Е          | Е             | E             | E            | E                  |
|  | aximum tensile force                      | N/50mm             | 220<br>190       | 206<br>180    | 230<br>230            |                        | 1362<br>1349               | 220<br>180   | 390<br>360       | 250<br>170         | 120<br>90        |                       | 400<br>270            | 200<br>250    | 230<br>180   | 250<br>200 | 320<br>300    | 480<br>500    | 380<br>300   | 250<br>200         |
| - Heller                                 | N 12311]                                  | lb/in              | 25<br>22         | 24<br>21      | 26<br>26              | 53<br>57               | 156<br>154                 | 25<br>21     | 45<br>41         | 29<br>19           | 14<br>10         | 50<br>46              | 46<br>31              | 23<br>29      | 26<br>21     | 29<br>23   | 37<br>34      | 55<br>57      | 43<br>34     | 29<br>23           |
|  | ongation MD/CD<br>N 12311]                | %                  | 15<br>15         | 480<br>540    | 15<br>10              | 26<br>19               | 2,8                        | 47<br>68     | 18<br>16         | 5<br>5             | 50<br>50         | 15<br>15              | 20 20                 | 25<br>25      | 35<br>40     | 35<br>40   | 10<br>10      | 65<br>65      | 60<br>80     | 35<br>40           |
| te te                                    | esistance to nail<br>aring MD/CD          | N                  | 155<br>145       | 147<br>165    | 110<br>110            | 400<br>400             |                            | 160<br>205   | 280<br>260       | 100<br>130         | 40<br>40         |                       | 240<br>250            | 170<br>170    | 125<br>145   |            | 250<br>290    | 265<br>320    | 225<br>300   |                    |
| [E                                       | N 12310]                                  | lbf                | 34.8<br>32.6     |               | 24.7<br>24.7          | 89.9<br>89.9           |                            |              | 62.9<br>58.5     |                    | 9                | 67.4<br>56.2          |                       |               | 28.1<br>32.6 |            |               |               | 50.6<br>67.4 |                    |
| in                                       | ternal                                    |                    | <b>V</b>         | <b>V</b>      | <b>V</b>              | <b>V</b>               | <b>V</b>                   | <b>V</b>     | <b>V</b>         | <b>V</b>           | <b>V</b>         | <b>V</b>              | <b>V</b>              | <b>V</b>      | <b>V</b>     | <b>V</b>   | <b>V</b>      | <b>V</b>      | <b>V</b>     | <b>V</b>           |
| e)                                       | kternal                                   |                    |                  |               |                       |                        | <b>V</b>                   |              |                  |                    |                  |                       | <b>V</b>              | <b>V</b>      | <b>V</b>     | <b>V</b>   | <b>V</b>      | <b>V</b>      | <b>V</b>     | <b>V</b>           |
| ro                                       | oof                                       |                    | <b>V</b>         | <b>√</b>      | <b>V</b>              | ✓                      | <b>V</b>                   | <b>V</b>     | <b>V</b>         | <b>V</b>           | <b>V</b>         | <b>V</b>              | ✓                     | ✓             | <b>V</b>     | <b>V</b>   | <b>V</b>      | <b>V</b>      | ✓            | <b>V</b>           |
| W  | all                                       |                    | <b>√</b>         | <b>V</b>      | <b>√</b>              | <b>V</b>               | <b>V</b>                   | <b>V</b>     | <b>√</b>         | <b>√</b>           | <b>√</b>         | <b>V</b>              | <b>√</b>              | <b>√</b>      | <b>√</b>     | <b>V</b>   | <b>√</b>      | <b>V</b>      | <b>√</b>     | <b>V</b>           |

|            |             |                    |                 |             |             |                 |                 |             | TR              | RASF                 | PIR                 |                    |                 |                      |                        |                 |                        |                      |                         |               |           |           | В          | YTU        | М          |                 |                    |
|------------|-------------|--------------------|-----------------|-------------|-------------|-----------------|-----------------|-------------|-----------------|----------------------|---------------------|--------------------|-----------------|----------------------|------------------------|-----------------|------------------------|----------------------|-------------------------|---------------|-----------|-----------|------------|------------|------------|-----------------|--------------------|
| TRASPIR 95 | TRASPIR 110 | TRASPIR EVO UV 115 | TRASPIR ALU 120 | TRASPIR 135 | TRASPIR 150 | TRASPIR NET 160 | TRASPIR EVO 160 | TRASPIR 200 | TRASPIR ALU 200 | TRASPIR EVO SEAL 200 | TRASPIR FELT UV 210 | TRASPIR EVO UV 210 | TRASPIR EVO 220 | TRASPIR ADHESIVE 260 | TRASPIR DOUBLE NET 270 | TRASPIR EVO 300 | TRASPIR DOUBLE EVO 340 | TRASPIR WELD EVO 360 | TRASPIR ALU FIRE A2 430 | TRASPIR METAL | BYTUM 400 | BYTUM 750 | BYTUM 1100 | BYTUM 1500 | BYTUM 2000 | BYTUM BASE 2500 | BYTIIM SI ATE 3500 |
| <b>V</b>   | <b>~</b>    | <b>V</b>           | <b>V</b>        | -1          | <b>V</b>    | <b>V</b>        | <b>V</b>        |             | <b>✓</b>        | <b>V</b>             | <b>√</b>            | <b>√</b>           | <b>V</b>        | ./                   | <b>✓</b>               | ✓               | <b>√</b>               | ✓                    | <b>V</b>                | <b>V</b>      |           |           |            |            |            |                 | _                  |
| V          |             |                    | <u> </u>        | <b>✓</b>    | <u> </u>    |                 |                 |             |                 |                      |                     |                    |                 | <b>✓</b>             |                        |                 |                        |                      |                         | <u> </u>      | <b>V</b>  | <b>V</b>  | <b>V</b>   | <b>V</b>   | <b>V</b>   | <b>√</b>        | \                  |
|            |             |                    |                 |             |             | _               |                 |             | <b>V</b>        |                      |                     |                    |                 |                      | <b>V</b>               |                 |                        | _                    |                         |               |           |           |            |            |            |                 |                    |
|            |             |                    |                 |             |             |                 |                 |             |                 |                      |                     |                    |                 |                      |                        |                 |                        |                      |                         |               |           |           |            |            |            |                 |                    |
|            |             |                    | <b>V</b>        |             |             |                 |                 |             | <b>✓</b>        |                      |                     |                    |                 |                      |                        |                 |                        |                      | ✓                       |               |           |           |            |            |            |                 |                    |
|            |             |                    |                 |             |             |                 |                 |             |                 |                      |                     |                    |                 | <b>√</b>             |                        |                 |                        |                      |                         |               |           |           |            |            |            | <b>√</b>        | 1                  |
|            |             | <b>V</b>           |                 |             |             |                 |                 |             |                 |                      | <b>V</b>            | <b>V</b>           |                 |                      |                        | ✓               |                        |                      | <b>√</b>                |               |           |           |            |            |            |                 | •                  |
| 95         | 112         | 115                | 120             | 175         | 150         | 160             | 160             | 200         | 200             | 200                  | 210                 | 210                | 220             | 260                  | 270                    | 300             | 3/10                   | 360                  | 430                     | 610           | 400       | 750       | 1100       | 1500       | 2000       | 2550            | 75                 |
| 90         | 112         | 115                | 120             | 133         | 150         | 100             | 100             | 200         | 200             | 200                  | 210                 | 210                | 220             | 200                  | 2/0                    | 300             | 340                    | 300                  | 430                     | 010           | 400       | 750       | 1100       | 1500       | 2000       | 2550            | 33                 |
| 0.31       | 0.37        | 0.38               | 0.39            | 0.44        | 0.49        | 0.52            | 0.52            | 0.66        | 0.66            | 0.66                 | 0.69                | 0.69               | 0.72            | 0.85                 | 0.88                   | 0.98            | 1.11                   | 1.18                 | 1.41                    | 1.67          | 1.31      | 2.46      | 3.60       | 4.92       | 6.55       | 8.36            | 11                 |
| 0,02       | 0,03        | 0,08               | 0,1             | 0,02        | 0,02        | 0,02            | 0,1             | 0,02        | 0,045           | 0,08                 | 0,1                 | 0,04               | 0,2             | 0,22                 | 0,035                  | 0,04            | 0,19                   | 0,2                  | 0,08                    | 0,02          | 22        | 38        | 55         | 120        | 120        | 200             | 2                  |
|            |             |                    |                 |             |             |                 |                 |             |                 |                      |                     |                    |                 |                      |                        |                 |                        |                      |                         |               |           |           |            |            |            |                 |                    |
| 175        | 117         | 44                 | 35              | 175         | 175         | 175             | 35              | 175         | 78              | 44                   | 35                  | 87                 | 17              | 16                   | 100                    | 87              | 18                     | 17                   | 44                      | 175           | 0         | 0.092     | 0.064      | 0.029      | 0.029      | 0.017           | 0.                 |
| E          | Е           | B-s1,d0            | E               | Е           | E           | E               | B-s1,d2         | Е           | E               | Е                    | B-s1,d2             | B-s1,d0            | Е               |                      | Е                      | B-s1,d0         | Е                      | Е                    | A2-s1,d0                | Е             | Е         | Е         | Е          | Е          | Е          | E               |                    |
|            | 250<br>165  |                    | 239<br>204      |             | 350<br>210  |                 |                 |             |                 |                      |                     |                    |                 |                      |                        |                 |                        |                      | 3000<br>3200            |               |           |           |            |            | 600<br>400 |                 |                    |
| 24         | 29          | 17                 | 27              | 32          | 40          | 48              | 32              | 41          | 40              | 34                   | 43                  | 34                 | 44              | 36                   | 74                     | 43              | 69                     | 48                   | 343                     | 37            | 57        | 57        | 74         | 69         | 69         | 46              |                    |
| 14         | 19          | 13                 | 23              | 22          | 24          | 48              | 25              | 31          | 26              | 25                   | 48                  | 23                 | 36              | 29                   | 91                     | 29              | 52                     | 56                   | 365                     | 26            | 46        | 46        | 57         | 46         | 46         | 34              |                    |
| 50         | 50          | 90                 | 94              | 70          | 100         | 25              | 50              | 45          | 30              | 50                   | 40                  | 25                 | 65              | 61                   | 40                     | 25              | 65                     | 50                   | 6                       | 45            | 45        | 45        | 45         | 40         | 40         | 35              | -                  |
| 90         | 70          | 90                 | 126             | 110         | 125         | 20              | 60              | 85          | 70              | 70                   | 55                  | 25                 | 80              | 66                   | 60                     | 25              | 80                     | 65                   | 5                       | 70            | 50        | 50        | 50         | 40         | 40         | 35              |                    |
|            |             |                    |                 |             |             |                 |                 |             |                 |                      |                     |                    |                 |                      |                        |                 |                        |                      | 580<br>450              |               |           |           |            |            | 220<br>230 |                 | 1                  |
|            |             |                    |                 |             |             |                 |                 |             |                 |                      |                     |                    |                 |                      |                        |                 |                        |                      | 130.4                   |               |           |           |            |            | 49.5       |                 |                    |
|            |             |                    |                 | 38.2        |             |                 |                 |             |                 |                      |                     |                    |                 |                      |                        |                 |                        |                      |                         |               |           |           |            |            | 51.7       |                 |                    |
| <b>V</b>   | <b>V</b>    | <b>V</b>           | <b>V</b>        | <b>V</b>    | <b>V</b>    | <b>V</b>        | <b>V</b>        | <b>V</b>    | <b>V</b>        | <b>V</b>             | <b>V</b>            | <b>V</b>           | <b>V</b>        | <b>V</b>             | <b>V</b>               | <b>V</b>        | <b>V</b>               | <b>V</b>             | <b>V</b>                | <b>V</b>      | <b>V</b>  | <b>V</b>  | <b>V</b>   | <b>V</b>   | <b>V</b>   | <b>V</b>        |                    |
| <b>✓</b>   | <b>✓</b>    | <b>✓</b>           | <b>✓</b>        | <b>✓</b>    | <b>✓</b>    | ✓<br>✓          | <b>✓</b>        | <b>✓</b>    | <b>✓</b>        | ✓                    | <b>✓</b>            | <b>✓</b>           | <b>✓</b>        | ✓                    | <b>✓</b>               | ✓<br>✓          | <b>✓</b>               | <b>✓</b>             | <b>✓</b>                | ✓<br>✓        | ✓         | <b>✓</b>  | <b>✓</b>   | <b>✓</b>   | <b>✓</b>   | <b>√</b>        | ,                  |
| <b>V</b>   | <u> </u>    | <b>V</b>           | <b>V</b>        | · /         | ·<br>•      | _               | <u> </u>        | Ť           |                 | · ·                  | <b>V</b>            | <b>V</b>           | <u> </u>        | <b>V</b>             | •                      |                 | <u> </u>               | Ť                    | · /                     | <b>V</b>      |           | _         | •          |            |            | _               |                    |

# CERTIFICATIONS AND COMPLIANCE

# CERTIFICATIONS



# **PASSIVE HOUSE**

The Passive House Institute, an independent research organisation that has set an internationally recognised standard for energy efficiency in construction, submits tapes and membranes to extremely rigorous tests to prove their effectiveness in terms of performance. Tests are carried out under boundary conditions that reflect reality as closely as possible in order to ensure that the product retains its functionality once installed. In the case of membranes, in particular, overlaps with other adjacent materials are observed.

CLIMA CONTROL 80, FLEXI BAND, SPEEDY BAND, SEAL BAND



## SINTEF

The Norwegian SINTEF certification is awarded to waterproofing solutions that successfully pass certain installation and ageing tests: effectiveness, durability and sustainability of the materials are just some of the areas of investigation explored by this independent certification body.

TRASPIR 110. FLEXI BAND



# **CSTB**

The French CSTB (Centre Scientifique et Technique du Bâtiment) issues certificates of conformity known as "Avis Technique", which declare that the requirements imposed by French market regulations for building materials are met. With regard to "Écrans de Sous-Toiture", i.e. waterproofing underlays for roofs, the parameters considered are resistance to the passage of water (E), permeability to water vapour (S) and mechanical resistance of the membrane (T).

TRASPIR 110, TRASPIR 150, TRASPIR NET 160



# BBA

BBA (British Board of Agrément) is the independent body that certifies that products and systems conform to British standards after subjecting candidate products to rigorous testing. Specifically, our membranes have been evaluated taking into account various parameters: weather tightness, risk of condensation, resistance to wind loads, strength of the membrane itself and its durability.

TRASPIR 95, TRASPIR 135, TRASPIR 150

# NATIONAL TECHNICAL STANDARDS

UNI 11470 "Coperture discontinue - Schermi e membrane traspiranti sintetiche Definizione, campo di applicazione e posa in opera" Classificazione in funzione della massa areica: classe A, B, C, D

Classificazione in funzione della resistenza meccanica: classe R1, R2, R3

UNI 11564 "Coperture discontinue - Teli impermeabilizzanti sottotegola bituminosi Definizione, campo di applicazione e posa in opera"

Tipologia di armatura: simbolo C, V, P, R Resistenza a trazione: classe SR0, SR1, SR2, SR3 oppure MR0, MR1, MR2

Flessibilità a freddo: classe A, B, C, D

Önorm B 3667 "Abdichtungsbahnen - Kunststoff-Dampfsperrbahnen - Nationale Umsetzung der ÖNORM EN 13984" DB:Dampfbremse, DS: Dampfsperre, DS dd: Dampfsperre dampfdicht

Önorm B 3661 "Abdichtungsbahnen - Unterdeck- und Unterspannbahnen für Dachdeckungen - Nationale Umsetzung der ÖNORM EN 13859-1 Unterdeckbahnen: UD Typ I, UD Typ II,

Unterspannbahnen: US

Elastomerbitumenbahnen als Unterdeck- und Unterspannbahnen: E-do nsk

F

DTU 31.2 "Construction de Maisons et Batiments a Ossature en Bois" pare-vapeur, Barriere souple a la diffusion de vapeaur d'eau (Bs dve), pare pluie Écrans souples sous-toiture: caractérise la résistance au passage de l'eau (E1, E2), caractérise la perméance à la vapeur d'eau (Sd1, Sd2, Sd3), caractérise la résistance mécanique (TR1, TR2, TR3)

Ecrans souples pare-pluie: Entraxe du support (Esc, E450, E600), Jeu entre panneaux de revetement exterieur (J0, Jf), Durée d'exposition en phase chantier (C1, C2, C3)

ZVDH "Deutsches Dachdeckerhandwerk Regelwerk"

Dd: Diffusionsdichte Schicht, Ds:Diffusionssperrende Schicht, Dh: Disffusionshemmende Schicht, Db: diffusionsbremsende Schicht, Fv: Feuchtevariabel

Unterspannbahnen USB: Klasse A, B

Vapour Permeable: Class 3 and Class 4

Unterdeckbahnen UDB: Klasse A. B. C

# AUS

AS/NZS 4200.1 "Pliable building membranes and underlays" Classification of vapor permeance Vapour Barrier: Class 1 and Class 2

CH

SIA 232 "Geneigte Dächer / Toitures inclinées":

• UD EB = UD für erhöhte Beanspruchung

UD AB = UD für ausserordentliche Beanspruchung
 V.v.o. = Verlegung von oben, Holraum /Fugen auf glatt und rau Untergrund
 V.v.u. = Verlegung von unten, über Kopf

# USA

IRC Water Vapor Retarder Classification

class 1: vapor impermeable

class 2: vapor semi-impermeable class 3: vapor semi-permeable

vp: vapor permeable

|               |                            | Α                           | СН                                  | В   | F                         | 1         | AUS                           | USA                      |
|---------------|----------------------------|-----------------------------|-------------------------------------|---|---------------------------|-----------|-------------------------------|--------------------------|
|               |                            | Önorm B4119<br>Önorm B 3667 | SIA 232                             | ZVDH  | DTU 31.2                  | UNI 11470 | AS/NZS<br>4200.1              | IRC                      |
|               | BARRIER NET SD40           | DB                          | V.v.u.                              | Dh  | pare-vapeur               | D/R2      | Class 2                       | Class 1                  |
| œ             | BARRIER SD150              | DS                          | V.v.u.                              | Ds  | pare-vapeur               | B/R2      | Class 1                       | Class 1                  |
| RE            | BARRIER ALU NET SD150      | DS                          | V.v.u.                              | Ds  | pare-vapeur               | D/R1      | Class 1                       | Class 1                  |
| BARRIER       | BARRIER ALU NET SD1500     | DS dd                       | V.v.u.                              | Dd  | pare-vapeur               | A/R3      | Class 1                       | Class 1                  |
|               | BARRIER ALU FIRE A2 SD2500 | DS dd                       | V.v.u.<br>V.v.o. H > 90mm           | Dd  | pare-vapeur<br>E1 Sd3 TR3 | B/R3      | Class 1                       | Class 1                  |
|               | VAPOR IN 120               | DB                          | V.v.u.                              | Dh  | pare-vapeur               | D/R1      | Class 2                       | Class 2                  |
|               | VAPOR IN NET 140           | DB                          | V.v.u.                              | Dh  | pare-vapeur               | C/R2      | Class 2                       | Class 2                  |
|               | VAPOR IN GREEN 200         | DB                          | V.v.u.                              | Db  | Bs dve                    | A/R1      | Class 2                       | Class 2                  |
| _             | CLIMA CONTROL 80           | -                           | V.v.u.                              | Fv   DIN 4108-3<br>DIN 68800-2                    | Bs dve                    | D/R1      | Class 2<br>Class 3            | Class 2                  |
| CLIMA CONTROL | CLIMA CONTROL NET 145      | -                           | V.v.u.<br>V.v.u.                    | Fv   DIN 4108-3<br>DIN 68800-2<br>Fv   DIN 4108-3 | Bs dve<br>Bs dve          | B/R3      | Class 2<br>Class 3<br>Class 2 | Class 2<br>vp<br>Class 2 |
| CON           | CLIMA CONTROL NET 160      | -                           | v.v.u.<br>V.v.o. H > 90mm<br>V.v.u. | DIN 68800-2                                       | E1 Sd2 TR2<br>Bs dve      | B/R3      | Class 3                       | Class 3                  |
| IMA           | VAPOR NET 110              | DB                          | V.v.u.<br>V.v.o. H > 90mm<br>V.v.u. | Db  | E1 Sd2 TR1<br>Bs dve      | D/R1      | Class 2                       | Class 2                  |
| cb            | VAPOR 140                  | DB                          | V.v.o. H > 90mm<br>V.v.u.           | Db  | E1 Sd2 TR1<br>Bs dve      | C/R1      | Class 2                       | Class 2                  |
| VAPOR         | VAPOR 150                  | DB                          | V.v.a.<br>V.v.o. H > 90mm<br>V.v.u. | Dh  | E1 Sd2 TR1<br>Bs dve      | B/R1      | Class 2                       | Class 2                  |
| \<br>A        | VAPOR NET 180              | DB                          | V.v.a.<br>V.v.o. H > 90mm<br>V.v.u. | Db  | E1 Sd2 TR3<br>Bs dve      | B/R3      | Class 2                       | Class 2                  |
|               | VAPOR EVO 190              | DB                          | v.v.u.<br>V.v.o. H > 90mm<br>V.v.u. | Db  | E1 Sd2 TR3<br>Bs dve      | B/R3      | Class 2                       | Class 2                  |
|               | VAPOR 225                  | DB                          | V.v.o. H > 90mm<br>V.v.u.           | Db  | E1 Sd2 TR3<br>pare-vapeur | A/R3      | Class 2                       | Class 2                  |
|               | VAPOR ADHESIVE 260         | DB                          | V.v.o. H > 90mm                     | Dh  | E1 Sd3 TR1                | A/R1      | Class 2                       | Class 2                  |
|               | TRASPIR 95                 | -                           | -                                   |   |                           | -         | Class 4                       | vp                       |
|               | TRASPIR 110                | -                           | UD (fU)                             | USB-A<br>UDB-B                                    | E1 Sd1 TR1<br>E450 Jf C2  | D/R1      | Class 4                       | vp                       |
|               | TRASPIR EVO UV 115         | -                           | -                                   | -   | E450 J0 C3                | -         | Class 4                       | vp                       |
|               | TRASPIR ALU 120            | -                           | -                                   | -   | E450 Jf C1                | -         | Class 4                       | vp                       |
|               | TRASPIR 135                | -                           | UD (fU)                             | USB-A<br>UDB-B                                    | E1 Sd1 TR1<br>E450 Jf C1  | C/R1      | Class 4                       | vp                       |
|               | TRASPIR 150                | UD Typ I                    | UD (wU)                             | USB-A<br>UDB-A                                    | E1 Sd1 TR2<br>E600 Jf C1  | B/R2      | Class 4                       | vp                       |
|               | TRASPIR NET 160            | UD Typ I<br>US              | UD (g)                              | USB-A<br>UDB-A                                    | E1 Sd1 TR3                | B/R3      | Class 4                       | vp                       |
|               | TRASPIR EVO 160            | UD Typ I                    | UD (wU)                             | USB-A<br>UDB-A                                    | E1 Sd1 TR1<br>E600 Jf C2  | B/R2      | Class 4                       | vp                       |
|               | TRASPIR 200                | UD Typ I<br>US              | UD (g)                              | USB-A<br>UDB-A                                    | E1 Sd1 TR2                | A/R2      | Class 4                       | vp                       |
| ≅             | TRASPIR ALU 200            | UD Typ I<br>US              | UD (g)                              | USB-A<br>UDB-A                                    | E1 Sd1 TR2                | A/R2      | Class 4                       | vp                       |
| TRASPIR       | TRASPIR EVO SEAL 200       | UD Typ I                    | UD (g)                              | USB-A<br>UDB-A                                    | E1 Sd1 TR2<br>E600 Jf C2  | A/R3      | Class 4                       | vp                       |
| TR/           | TRASPIR FELT UV 210        | UD Typ I                    | UD (g)                              | USB-A<br>UDB-A                                    | E1 Sd1 TR2<br>E600 J0 C3  | A/R2      | Class 4                       | vp                       |
|               | TRASPIR EVO UV 210         | -                           | -                                   | -   | E600 J0 C3                | -         | Class 4                       | vp                       |
|               | TRASPIR EVO 220            | UD Typ II<br>US             | UD (g)                              | USB-A<br>UDB-A                                    | E1 Sd1 TR2<br>E600 Jf C2  | A/R3      | Class 3                       | vp                       |
|               | TRASPIR ADHESIVE 260       | UD Typ I<br>US              | UD (g)                              | USB-A<br>UDB-A                                    | E1 Sd1 TR2<br>E600 Jf C1  | A/R3      | Class 3                       | vp                       |
|               | TRASPIR DOUBLE NET 270     | UD Typ I<br>US              | UD (g)                              | USB-A<br>UDB-A                                    | E1 Sd1 TR3                | A/R3      | Class 4                       | vp                       |
|               | TRASPIR EVO 300            | UD Typ I<br>US              | UD (g)                              | USB-A<br>UDB-A                                    | E1 Sd1 TR1<br>E600 J0 C3  | A/R2      | Class 4                       | vp                       |
|               | TRASPIR DOUBLE EVO 340     | UD Typ II<br>US             | UD (g)                              | USB-A<br>UDB-A                                    | E1 Sd1 TR3<br>E600 Jf C2  | A/R3      | Class 3                       | vp                       |
|               | TRASPIR WELD EVO 360       | UD Typ II<br>US             | UD (g)                              | USB-A<br>UDB-A                                    | E1 Sd1 TR3                | A/R3      | Class 3                       | vp                       |
|               | TRASPIR ALU FIRE A2 430    | UD Typ I<br>US              | UD (g)                              | USB-A<br>UDB-A                                    | E1 Sd1 TR3<br>E600 J0 C3  | A/R3      | Class 4                       | vp                       |
|               | TRASPIR METAL              | UD Typ I                    | UD (g)                              | USB-A<br>UDB-A                                    | E1 Sd1 TR2<br>E600 Jf C1  | A/R2      | Class 4                       | vp                       |
|               | BYTUM 400                  | E-d0 nsk                    | V.v.o. H > 90mm                     | USB-A   | E1 Sd3 TR2                | P SR2 A   | Class 2                       | Class 2                  |
|               | BYTUM 750                  | E-d0 nsk                    | UD (g) V.v.o. H > 90mm              | UDB-A<br>USB-A                                    | E1 Sd3 TR2                | P SR2 A   | Class 2                       | Class 1                  |
| _             | BYTUM 1100                 | E-d0 nsk                    | UD (g)<br>V.v.o. H > 90mm<br>UD (g) | UDB-A<br>USB-A<br>UDB-A                           | E1 Sd3 TR2                | P SR3 A   | Class 2                       | Class 1                  |
| BYTUM         | BYTUM 1500                 | E-d0 nsk                    | V.v.o. H > 90mm<br>UD (g)           | USB-A<br>UDB-A                                    | E1 Sd3 TR2                | P SR3 A   | Class 1                       | Class 1                  |
| B)            | BYTUM 2000                 | E-d0 nsk                    | V.v.o. H > 90mm<br>UD (g)           | USB-A<br>UDB-A                                    | E1 Sd3 TR2                | P SR3 A   | Class 1                       | Class 1                  |
|               | BYTUM BASE 2500            | E-d0 nsk                    | V.v.o.<br>UD (fU)                   | USB-B<br>UDB-C                                    | E1 Sd3 TR1                | P SR1 A   | Class 1                       | Class 1                  |
|               |                            |                             |                                     |   |                           |           |                               |                          |

# STOPS AND BARRIERS

# **I** BARRIERS AND STOPS

| BARRIER NET SD40 VAPOUR BARRIER SD 40 m  | 06  |
|--|-----|
| <b>BARRIER SD150</b> <i>VAPOUR BARRIER SD &gt; 145 m</i>                               | :08 |
| BARRIER NET ADHESIVE 200 SELF-ADHESIVE VAPOUR BARRIER SCREEN WITH REINFORCEMENT GRID   | 210 |
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| VAPOR 150 VAPOUR CONTROL MEMBRANE  | 236 |
| VAPOR NET 180  VAPOUR CONTROL MEMBRANE WITH REINFORCEMENT GRID                         | 237 |
| VAPOR EVO 190 HIGH PERFORMANCE VAPOUR CONTROL MEMBRANE                                 |     |
| VAPOR 225 VAPOUR CONTROL MEMBRANE  | :40 |
| VAPOR ADHESIVE 260 SELF-ADHESIVE VAPOUR CONTROL MEMBRANE                               | 242 |

# BARRIER NET SD40

# VAPOUR BARRIER Sd 40 m

# 110 g/m<sup>2</sup>



















# **TRANSPARENT**

It ensures simple, fast and safe installation.

# **REINFORCING GRID**

Thanks to its composition, it is not affected by mechanical stress or by staples and nails.

# **BLOWING**

The reinforcement grid offers great resistance to the membrane, even in the event of pressure caused by the insulating material being blown.

# COMPOSITION

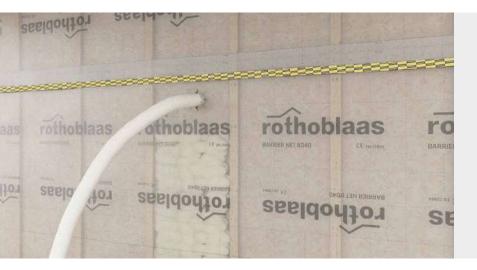
top layer PE functional film

middle layer PE reinforcing grid

bottom layer PE functional film

# CODES AND DIMENSIONS

| CODE  |   | description      | mass per unit area | tape | Н   | L   | Α                 | Н    | L    | Α                  |    |
|-------|---|------------------|--------------------|------|-----|-----|-------------------|------|------|--------------------|----|
|       |   |                  | [g/m²]             |      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| BAR40 | ) | BARRIER NET SD40 | 110                | -    | 1,5 | 50  | 75                | 5    | 164  | 807                | 80 |



# SAFE INSTALLATION

During installation of the insulation layer by means of blowing, mechanical stresses are created which the reinforcement grid can compensate for.

# **POLYETHYLENE**

Specific material with the function of strongly limiting the passage of vapour from the hot part to the cold part of structures, limiting the condensation problems.

# ■ TECHNICAL DATA

| Properties                         | standard             | value  | USC conversion                      |
|------------------------------------|----------------------|--|-------------------------------------|
| Mass per unit area                 | EN 1849-2            | 110 g/m <sup>2</sup>                                 | 0.36 oz/ft <sup>2</sup>             |
| Thickness                          | EN 1849-2            | 0,22 mm  | 9 mil                               |
| Water vapour transmission (Sd)     | EN 1931              | 40 m   | 0.087 US perm                       |
| Maximum tensile force MD/CD        | EN 12311-2           | > 220 / 190 N/50mm                                   | > 25 / 22 lb/in                     |
| Elongation MD/CD                   | EN 12311-2           | 15 / 15 %  | -                                   |
| Resistance to nail tearing MD/CD   | EN 12310-1           | > 155 / 145 N  | > 35 / 33 lbf                       |
| Watertightness                     | EN 1928              | conforming   | -                                   |
| Indirect exposure to UV rays       | -                    | 2 weeks  | -                                   |
| Temperature resistance             | -                    | -20 / 80 °C  | -4 / 176 °F                         |
| Reaction to fire                   | EN 13501-1           | class F  | -                                   |
| Resistance to penetration of air   | EN 12114             | $< 0.02 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.001 cfm/ft <sup>2</sup> at 50Pa |
| Water vapour resistance:           |                      |  |                                     |
| - after artificial ageing          | EN 1296 / EN 1931    | conforming   | -                                   |
| - in the presence of alkalis       | EN 1847 / EN 12311-2 | npd  | -                                   |
| Thermal conductivity (λ)           | -                    | 0,4 W/(m·K)  | 0.23 BTU/h·ft·°F                    |
| Specific heat                      | -                    | 1800 J/(kg·K)  | -                                   |
| Density                            | -                    | approx. 500 kg/m <sup>3</sup>                        | approx. 0.29 oz/in <sup>3</sup>     |
| Water vapour resistance factor (µ) | -                    | approx. 182000                                       | approx. 200 MNs/g                   |
| VOC content                        | -                    | 0 %  | -                                   |

# ■ RELATED PRODUCTS



SEAL BAND page 64



SPEEDY BAND page 70



HAND STAPLER page 331



# MECHANICAL STRENGTH

The reinforcement grid provides high mechanical resistance to the product, preventing major breakage in case of puncture.

# BARRIER SD150

# VAPOUR BARRIER Sd > 145 m

# 190 g/m<sup>2</sup>





















# **EXTRALARGE**

Also available in a 3,2 m version. Also ideal for waterproofing floors.

# **EASY INSTALLATION**

Thanks to its transparency, the membrane is immediately installed on the substructure.

# PRE-BENT

The 3.2 m version is rolled up pre-bent during production to optimise storage and save space.



single layer PE functional film

# CODES AND DIMENSIONS

| CODE     | description         | mass per unit area  | tape | roll     | Н   | L   | Α                 | Н    | L    | Α                  |    |
|----------|---------------------|---------------------|------|----------|-----|-----|-------------------|------|------|--------------------|----|
|          |                     | [g/m <sup>2</sup> ] |      | [m]      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| BAR150   | BARRIER SD150       | 190                 | -    | 1,5 x 25 | 1,5 | 25  | 37,5              | 5    | 82   | 404                | 52 |
| BAR15032 | BARRIER SD150 3,2 m | 190                 | -    | 1 x 25   | 3,2 | 25  | 80                | 11   | 82   | 861                | 52 |

# TRANSPARENT

The transparency of the product makes it easy to identify the strut when it is installed directly on the framed structure.

# **VERSATILITY**

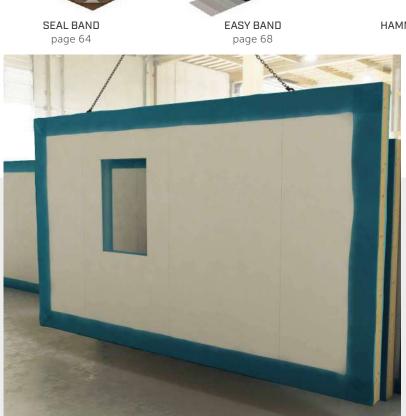
The extruded polyethyl product offers several possible applications, from temporary protection on the construction site to vapour control within the layers.

# ■ TECHNICAL DATA

| Properties                                    | standard             | value  | value                               |
|---|----------------------|--|-------------------------------------|
| Mass per unit area                            | EN 1849-2            | 190 g/m <sup>2</sup>                                 | 0.62 oz/ft <sup>2</sup>             |
| Thickness                                     | EN 1849-2            | 0,2 mm   | 8 mil                               |
| Water vapour transmission (Sd) <sup>(1)</sup> | EN 1931              | > 145 m  | 0.024 US perm                       |
| Maximum tensile force MD/CD                   | EN 12311-2           | > 206 / 180 N/50mm                                   | > 24 / 21 lb/in                     |
| Elongation MD/CD <sup>(1)</sup>               | EN 12311-2           | 480 / 540 %  | -                                   |
| Resistance to nail tearing MD/CD              | EN 12310-1           | > 147 / 165 N  | > 33 / 37 lbf                       |
| Watertightness                                | EN 1928              | conforming   | -                                   |
| Indirect exposure to UV rays                  | -                    | 2 weeks  | -                                   |
| Temperature resistance                        | -                    | -40 / 80 °C  | -40 / 176 °F                        |
| Reaction to fire                              | EN 13501-1           | class E  | -                                   |
| Resistance to penetration of air              | EN 12114             | $< 0.03 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.002 cfm/ft <sup>2</sup> at 50Pa |
| Water vapour resistance:                      |                      |  |                                     |
| - after artificial ageing                     | EN 1296 / EN 1931    | conforming   | -                                   |
| - in the presence of alkalis                  | EN 1847 / EN 12311-2 | conforming   | -                                   |
| Thermal conductivity (λ)                      | -                    | 0,4 W/(m·K)  | 0.23 BTU/h·ft·°F                    |
| Specific heat                                 | -                    | 1800 J/(kg·K)  | -                                   |
| Density                                       | -                    | approx. 940 kg/m <sup>3</sup>                        | approx. 0.54 oz/in <sup>3</sup>     |
| Water vapour resistance factor (μ)            | -                    | approx. 725000                                       | approx. 725 MNs/g                   |
| VOC content                                   | -                    | 0 %  | -                                   |

<sup>(1)</sup> Average values obtained from laboratory tests. Consult the Declaration of Performance for the minimum values.

# ■ RELATED PRODUCTS





HAMMER STAPLER 22 page 330

# **PREFABRICATION**

Thanks to the 3,2 m width, it is possible to join the barrier between the different walls without additional sealing or membrane cut-offs.

# BARRIER NET ADHESIVE 200

# SELF-ADHESIVE VAPOUR BARRIER SCREEN WITH REINFORCEMENT GRID

















# TRANSPARENT AND SAFE

Quick to install, it can also be used as protection during construction.

# **RESISTANT AND NON-SLIP**

The reinforcement grid provides high mechanical resistance and reduces the risk of slipping.

# COMPOSITION

top layer

PE functional film

middle layer

PE reinforcing grid

bottom laver

PE functional film

acrylate dispersion without solvents

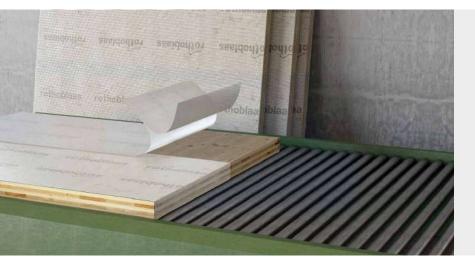
release liner

precut removable plastic film

# **CODES AND DIMENSIONS**

| CODE     | description                     | mass per unit area  | liner | Н    | L   | Α                 | Н    | L    | Α                  |
|----------|---------------------------------|---------------------|-------|------|-----|-------------------|------|------|--------------------|
|          |                                 | [g/m <sup>2</sup> ] | [mm]  | [m]  | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |
| BARA200  | BARRIER NET ADHESIVE 200        | 200                 | -     | 1,45 | 50  | 72,5              | 4,8  | 164  | 780                |
| BARAS200 | BARRIER NET ADHESIVE 200 STRIPE | 200                 | -     | 0,36 | 50  | 18,0              | 1.18 | 164  | 194                |

Available in different configurations on request. It is possible to customise the mass per unit area of the membrane, the amount of acrylic glue, the size and the pre-cut of the liner. Download the full data sheet at www.rothoblaas.com.



# **FAST INSTALLATION**

The fully self-adhesive surface of the membrane allows fast and safe installation without compromising performance.

# CONSTRUCTION SITE

During construction, it is essential to protect the structure, especially if the architectural design foresees that the wood remains visible in the finished building.

# SIMPLIFY YOUR INSTALLATION WITH OUR SELF-ADHESIVE MEMBRANES



Our range of self-adhesive membranes is constantly expanding. Our BARRIER, BARRIER ALU, VAPOR IN, CLIMA CONTROL, VAPOR, TRASPIR and BYTUM membranes can take on added value in the self-adhesive version: thanks to the glue, they are quick to apply and can be used both as protection during construction and as a functional layer within the layers.

Scan the QR code or visit our website to see what's new!

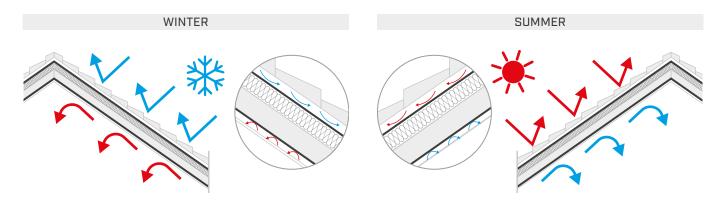






# I REFLECTIVE MEMBRANES

Reflective membranes offer a benefit in both winter and summer.



In winter, aluminium finished membranes applied indoor and coupled with an air gap, reflecting heat back into the interior transform the gap into an insulating layer and increase thermal performance.

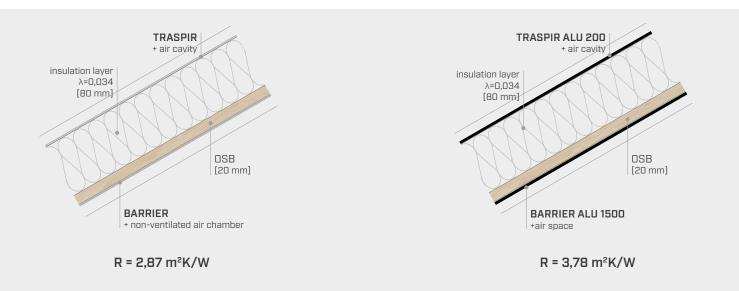
Reflective membranes on the outdoor side provide a benefit during the hot season because they reflect heat outwards, rejecting incoming heat.

Thermal stress affects materials; reducing it through the use of reflective membranes increases the durability of materials in the inner layers.

This is why reflective membranes offer superior thermal insulation, effective material protection and generally increase the performance of the roof.

# CALCULATION EXAMPLE

Example of thermal calculation with and without reflective membranes using the method proposed in ISO 6946.



In this calculation example, using reflective membranes results in a 32% increase in the thermal resistance of the layers and an increase in the performance of the panels.

# **I BARRIER ALU NET SD150**

# REFLECTIVE VAPOUR BARRIER Sd 150 m

100 g/m<sup>2</sup>

















3,0 m



# COMPOSITION

top layer functional aluminised PE film

middle layer PE reinforcing grid

bottom layer PE functional film



# ■ TECHNICAL DATA

| Properties   | standard             | value  | value                           |
|--|----------------------|--|---------------------------------|
| Mass per unit area   | EN 1849-2            | 100 g/m <sup>2</sup>   | 0.33 oz/ft <sup>2</sup>         |
| Thickness  | EN 1849-2            | 0,2 mm   | 8 mil                           |
| Water vapour transmission (Sd)   | EN 1931              | 150 m  | 0.023 US perm                   |
| Maximum tensile force MD/CD  | EN 12311-2           | > 230 / 230 N/50mm   | > 26 / 26 lb/in                 |
| Elongation MD/CD   | EN 12311-2           | 15 / 10 %  | -                               |
| Resistance to nail tearing MD/CD   | EN 12310-1           | > 110 / 110 N  | > 25 / 25 lbf                   |
| Watertightness   | EN 1928              | conforming   | -                               |
| Indirect exposure to UV rays   | -                    | 2 weeks  | -                               |
| Temperature resistance   | -                    | -40 / 80 °C  | -40 / 176 °F                    |
| Reaction to fire   | EN 13501-1           | class E  | -                               |
| Resistance to penetration of air   | EN 12114             | $< 0.02 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$                                 | < 0.001 cfm/ft² at 50Pa         |
| Water vapour resistance:   |                      |  |                                 |
| - after artificial ageing  | EN 1296 / EN 1931    | conforming   | -                               |
| - in the presence of alkalis   | EN 1847 / EN 12311-2 | npd  | -                               |
| Thermal conductivity (λ)   | -                    | 0,39 W/(m·K)   | 0.23 BTU/h·ft·°F                |
| Specific heat  | -                    | 1700 J/(kg·K)  | -                               |
| Density  | -                    | approx. 500 kg/m <sup>3</sup>  | approx. 0.29 oz/in <sup>3</sup> |
| Water vapour resistance factor (μ)   | -                    | approx. 7500000  | approx. 750 MNs/g               |
| VOC content  | -                    | 0 %  | -                               |
| Reflectivity   | EN 15976             | approx. 50 %   | -                               |
| Equivalent thermal resistance with 50 mm air gap ( $\epsilon_{\text{other surface}}$ 0,025-0,88) | ISO 6946             | $R_{g,0,025}$ : 0,799 (m <sup>2</sup> K)/W $R_{g,0,88}$ : 0,304 (m <sup>2</sup> K)/W |                                 |

# CODES AND DIMENSIONS

| CODE        | description                 | mass per unit<br>area | tape | roll     | Н   | L   | Α       | Н    | L    | Α                  |    |
|-------------|-----------------------------|-----------------------|------|----------|-----|-----|---------|------|------|--------------------|----|
|             |                             | [g/m <sup>2</sup> ]   |      | [m]      | [m] | [m] | $[m^2]$ | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| BARALU150   | BARRIER ALU NET SD150       | 100                   | -    | 1,5 x 50 | 1,5 | 50  | 75      | 5    | 164  | 807                | 80 |
| BARALUTT150 | BARRIER ALU NET SD150 TT    | 100                   | TT   | 1,5 x 50 | 1,5 | 50  | 75      | 5    | 164  | 807                | 80 |
| BARALU15030 | BARRIER ALU NET SD150 3,0 m | 100                   | -    | 3,0 x 50 | 3   | 50  | 150     | 10   | 164  | 1615               | 45 |

# BARRIER ALU NET SD1500

# REFLECTIVE VAPOUR BARRIER Sd > 1500 m













USA





B-s1,d0





# REINFORCING GRID

Thanks to its composition, the membrane is not affected by mechanical stress or by staples and nails.

# **REFLECTIVE**

Thanks to its ability to reflect up to 70% of the heat, the membrane improves the thermal performance of the construction panels.

# REACTION TO FIRE B-s1,d0

Self-extinguishing membrane that does not spread the flame in case of fire contributing to the protection of the structure.

# COMPOSITION

top layer functional aluminised PE film

middle layer PE reinforcing grid

bottom layer PE film

# **CODES AND DIMENSIONS**

| CODE       | description            | mass per unit area  | tape | Н   | L   | Α                 | Н    | L    | Α                  |    |
|------------|------------------------|---------------------|------|-----|-----|-------------------|------|------|--------------------|----|
|            |                        | [g/m <sup>2</sup> ] |      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| BARALU1500 | BARRIER ALU NET SD1500 | 200                 | -    | 1,5 | 50  | 75                | 5    | 164  | 807                | 30 |



# **ENERGY SAVING**

The reflectivity of the membrane improves the energy performance of the construction panels as it reflects heat inwards increasing thermal resistance.

# SAFETY

Thanks to its B-s1,d0 fire rating, the membrane is self-extinguishing in the event of contact with an open flame, providing greater safety both during construction and after the building has been completed.

# ■ TECHNICAL DATA

| Properties   | standard             | value   | value                           |
|--|----------------------|---|---------------------------------|
| Mass per unit area   | EN 1849-2            | 200 g/m <sup>2</sup>                            | 0.66 oz/ft <sup>2</sup>         |
| Thickness  | EN 1849-2            | 0,15 mm   | 6 mil                           |
| Water vapour transmission (Sd) <sup>(1)</sup>                        | EN 1931              | 4000 m  | 0.001 US perm                   |
| Maximum tensile force MD/CD <sup>(2)</sup>                           | EN 12311-2           | 465 / 495 N/50mm                                | 46 / 46 lb/in                   |
| Elongation MD/CD <sup>(2)</sup>                                      | EN 12311-2           | 26 / 19 %                                       | -                               |
| Resistance to nail tearing MD/CD <sup>(2)</sup>                      | EN 12310-1           | 400 / 400 N                                     | 67 / 67 lbf                     |
| Watertightness   | EN 1928              | conforming                                      | -                               |
| Indirect exposure to UV rays   | -                    | 4 weeks   | -                               |
| Temperature resistance   | -                    | -20 / 80 °C                                     | -4 / 176 °F                     |
| Reaction to fire   | EN 13501-1           | class B-s1,d0                                   |                                 |
| Resistance to penetration of air                                     | EN 12114             | $0 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | 0 cfm/ft <sup>2</sup> at 50Pa   |
| Water vapour resistance:   |                      |   |                                 |
| - after artificial ageing  | EN 1296 / EN 1931    | conforming                                      | -                               |
| - in the presence of alkalis   | EN 1847 / EN 12311-2 | npd   | -                               |
| Thermal conductivity (λ)   | -                    | 0,39 W/(m·K)                                    | 0.23 BTU/h·ft·°F                |
| Specific heat  | -                    | 1700 J/(kg·K)                                   | -                               |
| Density  | -                    | approx. 1330 kg/m <sup>3</sup>                  | approx. 0.77 oz/in <sup>3</sup> |
| Water vapour resistance factor (µ)                                   | -                    | approx. 26000000                                | approx. 20000 MNs/g             |
| VOC content  | -                    | 0 %   | -                               |
| Reflectivity   | EN 15976             | approx. 70 %                                    | -                               |
| Equivalent thermal resistance with 50mm air gap ( $\epsilon_{other}$ | ISO 6946             | $R_{g,0,025}$ : 0,801 (m <sup>2</sup> K)/W      | 4.56 h·ft²·°F/BTU               |
| surface 0,025-0,88)  | 130 0940             | $R_{g,0,88}$ : 0,406 (m <sup>2</sup> K)/W       | 2.30 h·ft <sup>2</sup> ·°F/BTU  |

<sup>(1)</sup> Sd = 4000 m (-2500 / + 4000).

# ■ FIRE PROTECTION



FIRE SEALING page 122 -124



FIRE FOAM page 118



FIRE STRIPE page 130



FRONT BAND UV 210 page 98



# MECHANICAL STRENGTH

The composition of the product and the reinforcement grid guarantee excellent dimensional stability even when installed on a soft, non-continuous support and therefore with possible mechanical stresses.

<sup>(2)</sup> Average values obtained from laboratory tests. Consult the Declaration of Performance for the minimum values.

# BARRIER ALU FIRE A2 SD2500 140 g/m<sup>2</sup>



# REFLECTIVE AIR VAPOUR BARRIER FIRE REACTION CLASS A2-s1,d0



















# NON-COMBUSTIBLE A2-s1.d0

Product tested according to EN 13501-1 and classified as non-combustible material.

# **ENERGY EFFICIENCY**

The reflectivity of the membrane improves the energy performance of the construction panels: reflecting heat inwards up to 95% it increases thermal resistance.

# **SAFETY**

As it is non-combustible, it can also be used in combination with photovoltaic systems or at electrical voltage points.



# COMPOSITION

top layer aluminium film

bottom layer fibreglass fabric

# CODES AND DIMENSIONS

| CODE          | description                | mass per unit area  | tape | Н   | L   | Α                 | Н    | L    | Α                  |    |
|---------------|----------------------------|---------------------|------|-----|-----|-------------------|------|------|--------------------|----|
|               |                            | [g/m <sup>2</sup> ] |      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| BARALUFIR2500 | BARRIER ALU FIRE A2 SD2500 | 140                 | -    | 1,2 | 50  | 60                | 4    | 164  | 646                | 48 |



# **RELIABLE**

Thanks to the special aluminium film, it is extremely UV-stable, ageing-resistant and non-combustible, offering protection even on the construction site.

# MECHANICAL STRENGTH AND STABILITY

The combination of aluminium cladding and glass fibre reinforcement ensures high mechanical performance that remains unchanged over time.

#### ■ TECHNICAL DATA

| D I'   | at a dead            | .1   |                                     |
|--|----------------------|--|-------------------------------------|
| Properties   | standard             | value  | value                               |
| Mass per unit area   | EN 1849-2            | 140 g/m <sup>2</sup>                                 | 0.46 oz/ft <sup>2</sup>             |
| Thickness  | EN 1849-2            | 0,1 mm   | 4 mil                               |
| Water vapour transmission (Sd) <sup>(1)</sup>                        | EN 1931              | 2500 m   | 0.001 US perm                       |
| Maximum tensile force MD/CD <sup>(1)</sup>                           | EN 12311-2           | 1362 / 1349 N/50mm                                   | 156 / 154 lb/in                     |
| Elongation MD/CD <sup>(1)</sup>                                      | EN 12311-2           | 2,8 / 3,8 %  | -                                   |
| Resistance to nail tearing MD/CD <sup>(1)</sup>                      | EN 12310-1           | 150 / 150 N  | 34 / 34 lbf                         |
| Watertightness   | EN 1928              | conforming   | -                                   |
| Temperature resistance   | -                    | -40 / 100 °C   | -40 / 212 °F                        |
| Reaction to fire   | EN 13501-1           | class A2-s1,d0                                       | -                                   |
| Resistance to penetration of air                                     | EN 12114             | $< 0.02 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.001 cfm/ft <sup>2</sup> at 50Pa |
| Water vapour resistance:   |                      |  |                                     |
| - after artificial ageing  | EN 1296 / EN 1931    | conforming   | -                                   |
| - in the presence of alkalis   | EN 1847 / EN 12311-2 | npd  | -                                   |
| Thermal conductivity (λ)   | -                    | 0,0001 W/(m·K)                                       | 0 BTU/h·ft·°F                       |
| Specific heat  | -                    | 1800 J/(kg·K)  | -                                   |
| Density  | -                    | approx. 1000 kg/m <sup>3</sup>                       | approx. 0.58 oz/in <sup>3</sup>     |
| Water vapour resistance factor (µ)                                   | -                    | approx. 25000000                                     | approx. 12500 MNs/g                 |
| VOC content  | -                    | 0 %  | -                                   |
| Reflectivity   | EN 15976             | 95 %   | -                                   |
| Equivalent thermal resistance with 50mm air gap ( $\epsilon_{other}$ | 150,5045             | $R_{g,0,025}$ : 0,821 (m <sup>2</sup> K)/W           | 4.66 h·ft²·°F/BTU                   |
| surface 0,025-0,88)  | ISO 6946             | $R_{g,0,88}$ : 0,731 (m <sup>2</sup> K)/W            | 4.15 h·ft <sup>2</sup> .°F/BTU      |
| UV stability <sup>(2)</sup>  | EN 13859-1/2         | 9 months   |                                     |
| Exposure to weather <sup>(2)</sup>                                   |                      | 16 weeks   |                                     |

<sup>(1)</sup> Average values obtained from laboratory tests. Consult the Declaration of Performance for the minimum values. (2) For the correlation between laboratory tests and actual conditions, see page 199.

#### ■ FIRE PROTECTION



FIRE SEALING page 122 -124



FIRE FOAM page 118



FIRE STRIPE page 130



FRONT BAND UV 210 page 98



#### **COMPLETE BARRIER**

Maximum resistance to the passage of water vapour. Thanks to its ability to reflect up to 95% of heat, it also improves the thermal performance of the construction panels.

# **I VAPOR IN 120**

VAPOUR CONTROL MEMBRANE

























## COMPOSITION

top layer vapour control PP film

bottom layer non-woven PP fabric



#### ■ TECHNICAL DATA

| Properties                                      | standard             | value   | value                         |
|---|----------------------|---|-------------------------------|
| Mass per unit area                              | EN 1849-2            | 120 g/m <sup>2</sup>                            | 0.39 oz/ft <sup>2</sup>       |
| Thickness                                       | EN 1849-2            | 0.4 mm  | 16 mil                        |
| Water vapour transmission (Sd)                  | EN 1931              | 30 m  | 0.14 US perm                  |
| Maximum tensile force MD/CD <sup>(1)</sup>      | EN 12311-2           | 220 / 180 N/50mm                                | 25 / 21 lb/in                 |
| Elongation MD/CD <sup>(1)</sup>                 | EN 12311-2           | 47 / 68 %                                       | -                             |
| Resistance to nail tearing MD/CD <sup>(1)</sup> | EN 12310-1           | 160 / 205 N                                     | 36 / 46 lbf                   |
| Watertightness                                  | EN 1928              | conforming                                      | -                             |
| Indirect exposure to UV rays                    | -                    | 2 weeks   | -                             |
| Temperature resistance                          | -                    | -20 / 80 °C                                     | -4 / 176 °F                   |
| Reaction to fire                                | EN 13501-1           | class E   | -                             |
| Resistance to penetration of air                | EN 12114             | $0 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | 0 cfm/ft <sup>2</sup> at 50Pa |
| Water vapour resistance:                        |                      |   |                               |
| - after artificial ageing                       | EN 1296 / EN 1931    | conforming                                      | -                             |
| - in the presence of alkalis                    | EN 1847 / EN 12311-2 | npd   | -                             |
| Thermal conductivity (λ)                        | -                    | 0,3 W/(m·K)                                     | 0.17 BTU/h·ft·°F              |
| Specific heat                                   | -                    | 1800 J/(kg·K)                                   | -                             |
| Density   | -                    | approx. 290 kg/m <sup>3</sup>                   | approx. 0.17 oz/in³           |
| Water vapour resistance factor (µ)              | -                    | approx. 75000                                   | approx. 150 MNs/g             |
| VOC content                                     | -                    | 0 %   | -                             |

 $<sup>^{(1)}</sup>$  Average values obtained from laboratory tests. Consult the Declaration of Performance for the minimum values.

| CODE    | description        | tape | Н   | L   | Α                 | Н    | L    | Α                  |    |
|---------|--------------------|------|-----|-----|-------------------|------|------|--------------------|----|
|         |                    |      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| VV120   | VAPOR IN 120       | -    | 1,5 | 50  | 75                | 5    | 164  | 807                | 36 |
| VV12030 | VAPOR IN 120 3,0 m | -    | 3   | 50  | 150               | 10   | 164  | 1615               | 30 |

# I VAPOR IN NET 140

VAPOUR CONTROL MEMBRANE

WITH REINFORCEMENT GRID



















A Önorm B3667 DB





#### COMPOSITION

top layer vapour control PP film

reinforcing layer reinforcing PP grid

bottom layer non-woven PP fabric



## ■ TECHNICAL DATA

| Properties                                      | standard             | value                                    | value                         |
|---|----------------------|--|-------------------------------|
| Mass per unit area                              | EN 1849-2            | 140 g/m <sup>2</sup>                     | 0.46 oz/ft <sup>2</sup>       |
| Thickness                                       | EN 1849-2            | 0,15 mm                                  | 6 mil                         |
| Water vapour transmission (Sd)                  | EN 1931              | 30 m                                     | 0.14 US perm                  |
| Maximum tensile force MD/CD <sup>(1)</sup>      | EN 12311-2           | 390 / 360 N/50mm                         | 45 / 41 lb/in                 |
| Elongation MD/CD <sup>(1)</sup>                 | EN 12311-2           | 18 / 16 %                                | -                             |
| Resistance to nail tearing MD/CD <sup>(1)</sup> | EN 12310-1           | 280 / 260 N                              | 63 / 58 lbf                   |
| Watertightness                                  | EN 1928              | conforming                               | -                             |
| Indirect exposure to UV rays                    | -                    | 2 weeks                                  | -                             |
| Temperature resistance                          | -                    | -20 / 80 °C                              | -4 / 176 °F                   |
| Reaction to fire                                | EN 13501-1           | class E                                  | -                             |
| Resistance to penetration of air                | EN 12114             | 0 m <sup>3</sup> /(m <sup>2</sup> h50Pa) | 0 cfm/ft <sup>2</sup> at 50Pa |
| Water vapour resistance:                        |                      |  |                               |
| - after artificial ageing                       | EN 1296 / EN 1931    | conforming                               | -                             |
| - in the presence of alkalis                    | EN 1847 / EN 12311-2 | npd                                      | -                             |
| Thermal conductivity (λ)                        | -                    | 0,3 W/(m·K)                              | 0.17 BTU/h·ft·°F              |
| Specific heat                                   | -                    | 1800 J/(kg·K)                            | -                             |
| Density   | -                    | approx. 933 kg/m <sup>3</sup>            | approx. 0.54 oz/in³           |
| Water vapour resistance factor (μ)              | -                    | approx. 167000                           | approx. 150 MNs/g             |
| VOC content                                     | -                    | 0 %                                      | -                             |

<sup>(1)</sup> Average values obtained from laboratory tests. Consult the Declaration of Performance for the minimum values.

| CODE  | description      | tape | Н   | L   | Α       | Н    | L    | Α                  |    |
|-------|------------------|------|-----|-----|---------|------|------|--------------------|----|
|       |                  |      | [m] | [m] | $[m^2]$ | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| VV140 | VAPOR IN NET 140 | -    | 1,5 | 50  | 75      | 5    | 164  | 807                | 35 |

# SUSTAINABILITY



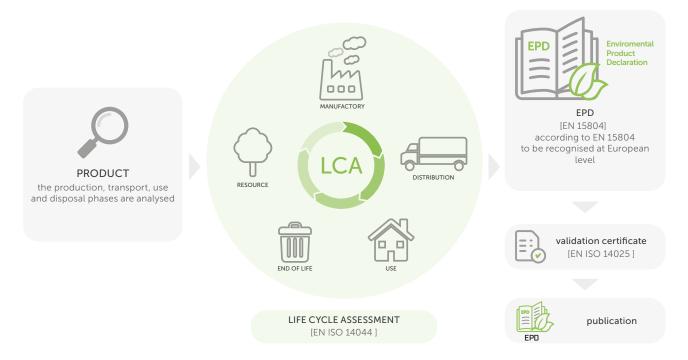


Environmental sustainability is an increasingly central issue in the construction sector and it has been taken into account in our company for a long time.

Although timber construction is in many respects more sustainable than other building systems, an assessment of the impacts linked to the entire life cycle of the products is still necessary in order to make an objective comparison between different building systems.

A suitable tool for this is the **EPD** (**Environmental Product Declaration**). This is a type III environmental declaration in accordance with EN ISO 14025 which, based on specific parameters, makes it possible to produce a technical document to use in order to make an objective comparison of the environmental impact of various products.

The EPD is a declaration based on **LCA** (**Life Cycle Assessment**) for which the study of all aspects related to the production, use and disposal of the product is required.



This is a voluntary initiative, not obligatory by law, which we have decided to implement to know the environmental impact of our products, and to allow the designer to have an accurate idea of the ecological footprint of the building he is designing. It is an ongoing process; over time other products will be added to the 16 products that currently have an EPD value.

#### SUSTAINABLE SOLUTION

| PRODUCT                |     | PAGE |
|------------------------|-----|------|
| BARRIER ALU NET SD1500 | EPD | 214  |
| VAPOR IN 120           | EPD | 218  |
| VAPOR IN NET 140       | EPD | 219  |
| VAPOR IN GREEN 200     | EPD | 221  |
| CLIMA CONTROL 80       | EPD | 228  |
| CLIMA CONTROL NET 160  | EPD | 232  |
| VAPOR 225              | EPD | 240  |
| VAPOR EVO 190          | LEA | 238  |

| PRODUCT                |     | PAGE |
|------------------------|-----|------|
| TRASPIR 110            | EPD | 253  |
| TRASPIR EVO UV 115     | LEA | 254  |
| TRASPIR NET 160        | EPD | 261  |
| TRASPIR EVO 160        | EPD | 262  |
| TRASPIR EVO SEAL 200   | EPD | 266  |
| TRASPIR EVO UV 210     | EPD | 270  |
| TRASPIR EVO 220        | EPD | 274  |
| TRASPIR EVO 300        | EPD | 282  |
| TRASPIR DOUBLE EVO 340 | EPD | 284  |
| TRASPIR WELD EVO 360   | EPO | 288  |

# VAPOR IN GREEN 200

























## COMPOSITION

top layer kraft paper reinforcing layer reinforcing grid

middle layer functional film

bottom layer kraft paper



#### **TECHNICAL DATA**

| Properties                         | standard             | value  | USC conversion                      |
|------------------------------------|----------------------|--|-------------------------------------|
| Mass per unit area                 | EN 1849-2            | 200 g/m <sup>2</sup>                                 | 0.66 oz/ft <sup>2</sup>             |
| Thickness                          | EN 1849-2            | 0,35 mm  | 14 mil                              |
| Water vapour transmission (Sd)     | EN 1931              | 7 m  | 0.5 US perm                         |
| Maximum tensile force MD/CD        | EN 12311-2           | > 250 / 170 N/50mm                                   | > 29 / 19 lb/in                     |
| Elongation MD/CD                   | EN 12311-2           | 5 / 5 %  | -                                   |
| Resistance to nail tearing MD/CD   | EN 12310-1           | > 100 / 130 N  | > 22 / 29 lbf                       |
| Watertightness                     | EN 1928              | conforming   | -                                   |
| Temperature resistance             | -                    | -40 / 80 °C  | -40 / 176 °F                        |
| Reaction to fire                   | EN 13501-1           | class E  | -                                   |
| Resistance to penetration of air   | EN 12114             | $< 0.02 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.001 cfm/ft <sup>2</sup> at 50Pa |
| Water vapour resistance:           |                      |  |                                     |
| - after artificial ageing          | EN 1296 / EN 1931    | conforming   | -                                   |
| - in the presence of alkalis       | EN 1847 / EN 12311-2 | npd  | -                                   |
| Indirect exposure to UV rays       | -                    | 2 weeks  | -                                   |
| Thermal conductivity (λ)           | -                    | 0,13 W/(m·K)   | 0.08 BTU/h·ft·°F                    |
| Specific heat                      | -                    | 1000 J/(kg·K)  | -                                   |
| Density                            | -                    | approx. 570 kg/m <sup>3</sup>                        | approx. 0.33 oz/in <sup>3</sup>     |
| Water vapour resistance factor (μ) | -                    | approx. 20000  | approx. 35 MNs/g                    |
| VOC content                        | -                    | 0 %  | -                                   |

| CODE   | description        | tape | Н   | L   | Α       | Н    | L    | Α                  |    |
|--------|--------------------|------|-----|-----|---------|------|------|--------------------|----|
|        |                    |      | [m] | [m] | $[m^2]$ | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| VVG200 | VAPOR IN GREEN 200 | -    | 1,5 | 50  | 75      | 5    | 164  | 807                | 30 |

# RECOMMENDATIONS FOR INSTALLATION: BARRIER, VAPOR AND CLIMA CONTROL

APPLICATION ON WALL - INTERNAL SIDE

















- BARRIER NET SD40, BARRIER SD150, BARRIER ALU NET SD150, BARRIER ALU NET SD1500, BARRIER ALU FIRE A2 SD2500, VAPOR IN 120, VAPOR IN NET 140, VAPOR IN GREEN 200, VAPOR NET 110, VAPOR 140, CLIMA CONTROL 80, CLIMA CONTROL NET 145 HAMMER STAPLER 47, HAMMER STAPLER 22, HAND STAPLER, STAPLES
- MEMBRANE GLUE, ECO GLUE, SUPERB GLUE

  3a DOUBLE BAND, SUPRA BAND, BUTYL BAND
  ROLLER, FLY FOAM, FOAM CLEANER
- **3b** ALU BAND, SEAL BAND, EASY BAND, SPEEDY BAND, FLEXI BAND, SOLID BAND, PLASTER BAND
- 4 PRIMER SPRAY, PRIMER
- 5 BYTUM BAND, PROTECT, FLEXI BAND, PLASTER BAND
- 6 NAIL PLASTER, GEMINI, NAIL BAND, BUTYL BAND

## RECOMMENDATIONS FOR INSTALLATION: BARRIER, VAPOR AND **CLIMA CONTROL**

APPLICATION ON WINDOW - INTERNAL SIDE

















- BARRIER NET SD40, BARRIER SD150, BARRIER ALU NET SD150, BARRIER ALU NET SD1500, BARRIER ALU FIRE AZ SD2500, VAPOR IN 120, VAPOR IN NET 140, VAPOR IN GREEN 200, VAPOR NET 110, VAPOR 140, CLIMA CONTROL 80, CLIMA CONTROL NET 145 HAMMER STAPLER 47, HAMMER STAPLER 22, HAND STAPLER, STAPLES
- 3 MARLIN, CUTTER
- **5a** ALPHA
- SEAL BAND, EASY BAND, FLEXI BAND, SOLID BAND, SMART BAND, PLASTER BAND, MANICA PLASTER

## RECOMMENDATIONS FOR INSTALLATION: BARRIER, VAPOR AND **CLIMA CONTROL**

APPLICATION ON ROOF - INTERNAL SIDE



- 1a SUPRA BAND, BUTYL BAND
- 1b DOUBLE BAND, MEMBRANE GLU, ECO GLUE, SUPERB GLUE
- BARRIER NET SD40, BARRIER SD150, BARRIER ALU NET SD150, BARRIER ALU NET SD1500, BARRIER ALU FIRE AZ SD2500, VAPOR IN 120, VAPOR IN NET 140, VAPOR IN GREEN 200, CLIMA CONTROL 80, CLIMA CONTROL NET 145, CLIMA CONTROL NET 160, VAPOR NET 110, VAPOR 140, VAPOR NET 180
- MEMBRANE GLUE, ECO GLUE, SUPERB GLUE 3b DOUBLE BAND, SUPRA BAND, BUTYL BAND
- 3C SEAL BAND, EASY BAND, SPEEDY BAND, FLEXI BAND, SOLID BAND, PLASTER BAND, MANICA PLASTER

# RECOMMENDATIONS FOR INSTALLATION: BARRIER, VAPOR AND CLIMA CONTROL

APPLICATION ON ROOF WINDOW - INTERNAL SIDE

















BARRIER NET SD40, BARRIER SD150, BARRIER ALU NET SD150, BARREIR ALU NET SD1500, BARRIER ALU FIRE A2 SD2500, VAPOR IN 120, VAPOR IN NET 140, VAPOR IN GREEN 200, CLIMA CONTROL 80, CLIMA CONTROL NET 145, CLIMA CONTROL NET 160, VAPOR NET 110, VAPOR 140, VAPOR NET 180 MARLIN, CUTTER

<sup>7</sup>a SEAL BAND, EASY BAND, FLEXI BAND, SOLID BAND, SMART BAND, PLASTER BAND, MANICA PLASTER 7b

# I FLAT ROOF WITH CLIMA CONTROL

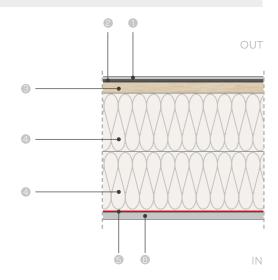


#### FLAT ROOF DESIGN

Verification of the thermo-hygrometric performance of a flat roof layer incorporating a variable vapour diffusion membrane (CLIMA CONTROL). In particular, the objective is to verify the drying of the layers, following a humidity accumulation phase.

The dimensions of construction panels used for the experimental phase were  $1,2 \times 1,2$  m having the following characteristics:

- **BYTUM SLATE 3500** (Sd 280 m)
- **BYTUM BASE 2500** (Sd 200 m)
- **© OSB panel 20 mm** (Sd 5 m)
- (Sd 0,24 m)
- **© CLIMA CONTROL** (Sd 0,15-5 m)
- **12,5 mm fibre-gypsum board** (Sd 0,05 m)



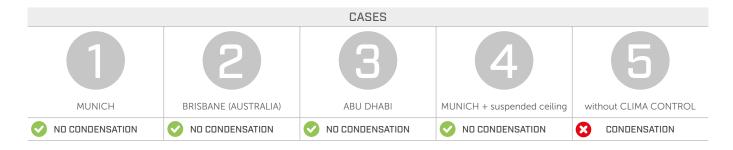
#### LABORATORY TEST

Given the innovative behaviour of the CLIMA CONTROL membrane, an initial measurement phase was carried out in the laboratory to verify the real behaviour of the proposed layers. After a conditioning phase in which the different layers were kept at high humidity (80%), the specimen was installed in the Multifunctional Façade Lab and the test phase was started under dynamic outdoor conditions in which the conditions of a central European summer climate (Munich) were reproduced. Already after 17 days, it was possible to notice the drying process and the decrease of moisture content within the layers.



#### SIMULATION WITH SOFTWARE

For the joint assessment of heat, moisture and matter transport in porous building materials With the data obtained from the laboratory test, it was possible to calibrate the model in order to extend the thermo-hygrometric study in various climates and for a long-term analysis (10 years).



#### CONCLUSIONS

In all the cases simulated, the layers did not present any problems relating to the formation of condensation, suggesting that the application of the CLIMA CONTROL membrane is valid for preventing the excessive accumulation of humidity, also allowing the layers to dry in summer.

The presence of CLIMA CONTROL is decisive in periodically avoiding winter condensation phenomena towards the outermost layers, as demonstrated by the simulation of a Central European climate in the absence of the membrane.

The analysis of layers for a flat roof requires in-depth knowledge of technical physics and the ability to use specific software. A correct design and analysis of the layers is not easy and each situation requires a precise definition of the boundary conditions and the materials used.

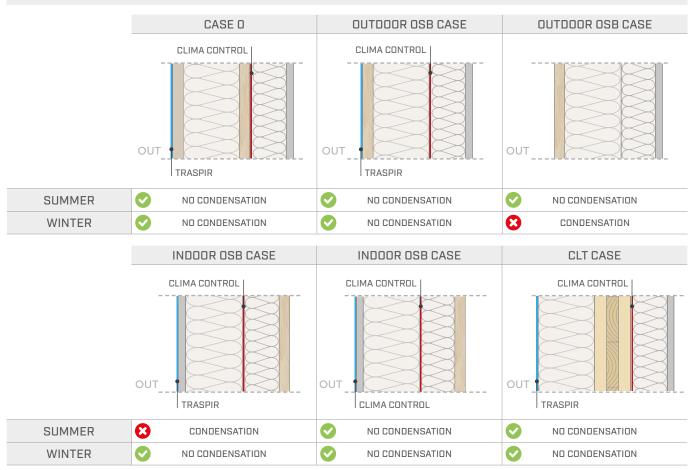
# WALL WITH CLIMA CONTROL



| COLD AND HUMID OUTDOOR CLIMATE |                       |                      |  |  |  |  |
|--------------------------------|-----------------------|----------------------|--|--|--|--|
| WINTER                         | INTERNAL              | OUTDOOR              |  |  |  |  |
| CONDITIONS                     | T = 20°C<br>U.R.= 40% | T = 0°C<br>U.R.= 80% |  |  |  |  |

| HOT AND HUMID OUTDOOR CLIMATE |                       |                       |  |  |  |  |
|-------------------------------|-----------------------|-----------------------|--|--|--|--|
| SIIMMED                       | INTERNAL              | OUTDOOR               |  |  |  |  |
| SUMMER<br>CONDITIONS          | T = 26°C<br>U.R.= 80% | T = 40°C<br>U.R.= 70% |  |  |  |  |

#### SIMULATION WITH SOFTWARE



#### LABORATORY TEST

In order to recreate the desired boundary conditions, it was decided to use a fictitious climatic chamber built in the laboratory, which is very well insulated both thermally and in terms of vapour diffusion. The specimen formed one side of the craft chamber, which was placed inside a single-zone climatic chamber capable of generating the desired temperature and humidity conditions. Within the fictitious climatic chamber, the desired temperature and humidity conditions were created by means of a thermostat heater and the use of a specially mixed salt solution.



#### CONCLUSIONS

When comparing the various outputs, the importance of vapour control and breathable membranes to adequately regulate vapour flows through building packages becomes apparent.

It is also clear that the choice of location and type of membrane depends on the climatic conditions and the materials used.

In order to ensure optimal performance of the building casing, the processes of heat, vapour, air and wind transport that occur within the different components must be studied and controlled to avoid interstitial and surface condensation.

# CLIMA CONTROL 80



























## VARIABLE DIFFUSION

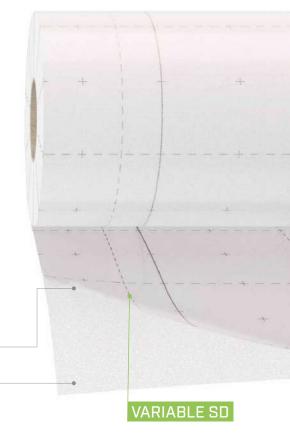
Variable resistance to vapour diffusion: maximum protection for walls and excellent security in insulation.

#### **TRANSPARENCY**

Easy to install thanks to its transparent quality; controls the passage of water vapour based on climate and humidity.

#### **SCIENTIFICALLY TESTED**

The product has been researched and tested by external scientific bodies who have also simulated its behaviour in real conditions.



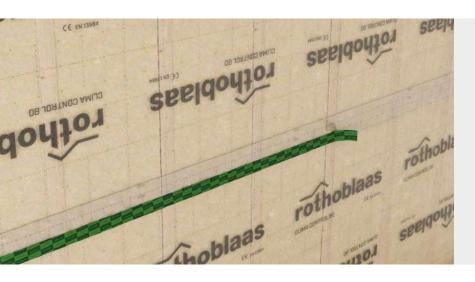
#### COMPOSITION

top layer PA functional film

bottom layer non-woven PP fabric

#### ■ CODES AND DIMENSIONS

| CODE    | description      | tape | Н   | L   | Α                 | Н    | L    | А                  |    |
|---------|------------------|------|-----|-----|-------------------|------|------|--------------------|----|
|         |                  |      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| CLIMA80 | CLIMA CONTROL 80 | -    | 1,5 | 50  | 75                | 5    | 164  | 807                | 81 |



## **EASY INSTALLATION**

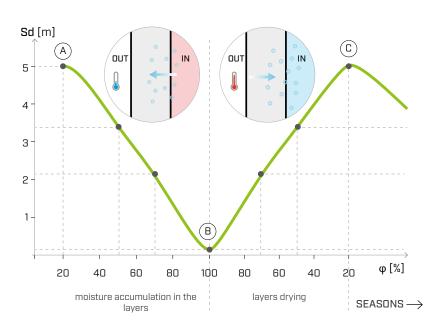
Ideal for installation directly on the substructure (struts or joists), thanks to its slight transparency.

#### RETROFIT

Thanks to its ability to adapt vapour diffusion according to the hygrometric conditions of the materials it comes into contact with, it is ideal for energy refurbishment of existing buildings.

#### ■ TECHNICAL DATA

| Properties                                  | standard             | value  | USC conversion                  |
|---|----------------------|--|---------------------------------|
| Mass per unit area                          | EN 1849-2            | 80 g/m <sup>2</sup>                                  | 0.26 oz/ft <sup>2</sup>         |
| Thickness                                   | EN 1849-2            | 0,22 mm  | 9 mil                           |
| Variable water vapour transmission (Sd)     | EN 1931              | 0,15 / 5 m   | 23 / 0.7 US perm                |
| Dry/wet cup water vapour transmission       | ASTM E96/ E96M       | 1.86/10.6 US perm<br>106/605 ng/(s·m²·Pa)            | -                               |
| Maximum tensile force MD/CD                 | EN 12311-2           | > 120 / 90 N/50mm                                    | > 14 / 10 lb/in                 |
| Elongation MD/CD                            | EN 12311-2           | 50 / 50 %  | -                               |
| Resistance to nail tearing MD/CD            | EN 12310-1           | > 40 / 40 N  | 9 / 9 lbf                       |
| Watertightness                              | EN 1928              | conforming   | -                               |
| Indirect exposure to UV rays                | -                    | 2 weeks  | -                               |
| Temperature resistance                      | -                    | -20 / 80 °C  | -4 / 176 °F                     |
| Reaction to fire                            | EN 13501-1           | class E  | -                               |
| Resistance to penetration of air            | EN 12114             | $< 0.02 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0 cfm/ft² at 50Pa             |
| Vapour barrier                              | ASTM E 2178-13       | conforming   | -                               |
| Water vapour resistance:                    |                      |  |                                 |
| - after artificial ageing                   | EN 1296 / EN 1931    | conforming   | -                               |
| - in the presence of alkalis                | EN 1847 / EN 12311-2 | npd  | -                               |
| Thermal conductivity (λ)                    | -                    | 0,2 W/(m·K)  | 0.12 BTU/h·ft·°F                |
| Specific heat                               | -                    | 1700 J/(kg·K)  | -                               |
| Density                                     | -                    | approx. 400 kg/m <sup>3</sup>                        | approx. 0.23 oz/in <sup>3</sup> |
| Variable water vapour resistance factor (μ) | -                    | approx. 1000 / 25000                                 | approx. 0,75/25 MNs/g           |
| VOC content                                 | -                    | 0 %  | -                               |



#### (A) DRY LAYERS : Sd 5 m

maximum protection - vapour control layer to limit the passage of vapour in view of the season when moisture accumulates within the layers

#### (B) HUMID LAYERS : Sd 0,15 m

<u>maximum breathability</u> - breathable membrane

to allow drying during the reverse steam diffusion phenomenon

#### C DRY LAYERS : Sd 5 m

<u>maximum protection</u> for the start of a new year and a new cycle



## **HYGROMETRIC PROPERTIES**

The special PA film gives the product the ability to adapt to the hygrometric conditions of the building. If the membrane comes into contact with high humidity levels, it transforms from a vapour barrier into a breathable product, guaranteeing that the structure remains dry.

# **I CLIMA CONTROL NET 145**







## MEMBRANE WITH VARIABLE VAPOUR DIFFUSION AND REINFORCEMENT GRID













#### **ENERGY RECONDITIONING**

Ideal to increase energy performance for packages and solutions for reconditioning of existing structures.

#### VARIABLE DIFFUSION

Variable resistance to vapour diffusion: maximum protection for walls and excellent security in insulation.

#### **BLOWING**

The reinforcement grid offers great resistance to the membrane, even in the event of pressure caused by the insulating material being blown.

# **VARIABLE SD**

#### COMPOSITION

top layer PA functional film

reinforcing layer PE reinforcing grid

bottom layer non-woven PP fabric

#### CODES AND DIMENSIONS

| CODE     | description           | tape | Н   | L   | Α                 | Н    | L    | Α                  |    |
|----------|-----------------------|------|-----|-----|-------------------|------|------|--------------------|----|
|          |                       |      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| CLIMA145 | CLIMA CONTROL NET 145 | -    | 1,5 | 50  | 75                | 5    | 164  | 807                | 36 |



#### REINFORCING GRID

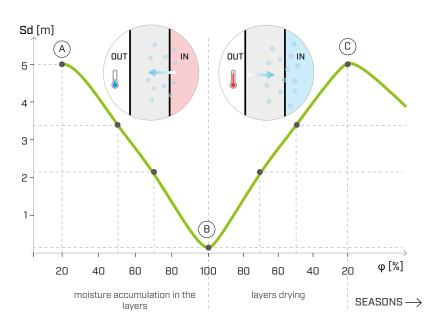
The reinforcement grid ensures excellent dimensional stability even when laid on a soft, non-continuous support and therefore with possible mechanical stresses.

#### SAFETY

During installation of the insulation layer by means of blowing, mechanical stresses are created which the reinforcement grid can compensate for.

#### ■ TECHNICAL DATA

| Properties                                  | standard             | value  | value                               |
|---|----------------------|--|-------------------------------------|
| Mass per unit area                          | EN 1849-2            | 145 g/m <sup>2</sup>                                 | 0.48 oz/ft <sup>2</sup>             |
| Thickness                                   | EN 1849-2            | 0,6 mm   | 24 mil                              |
| Variable water vapour transmission (Sd)     | EN 1931              | 0,15 / 5 m   | 23 / 0.7 US perm                    |
| Maximum tensile force MD/CD                 | EN 12311-2           | > 440 / 400 N/50mm                                   | 50 / 46 lb/in                       |
| Elongation MD/CD                            | EN 12311-2           | > 15 / 15 %  | -                                   |
| Resistance to nail tearing MD/CD            | EN 12310-1           | > 300 / 250 N  | 67 / 56 lbf                         |
| Watertightness                              | EN 1928              | conforming   | -                                   |
| Indirect exposure to UV rays                | -                    | 2 weeks  | -                                   |
| Temperature resistance                      | -                    | -40 / 80 °C  | -40 / 176 °F                        |
| Reaction to fire                            | EN 13501-1           | class E  | -                                   |
| Resistance to penetration of air            | EN 12114             | $< 0.02 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.001 cfm/ft <sup>2</sup> at 50Pa |
| Water vapour resistance:                    |                      |  |                                     |
| - after artificial ageing                   | EN 1296 / EN 1931    | conforming   | -                                   |
| - in the presence of alkalis                | EN 1847 / EN 12311-2 | npd  | -                                   |
| Thermal conductivity (λ)                    | -                    | approx. 0,2 W/(m K)                                  | 0.12 BTU/h·ft·°F                    |
| Specific heat                               | -                    | approx. 1700 J/(kg·K)                                | -                                   |
| Density                                     | -                    | approx. 245 kg/m <sup>3</sup>                        | approx. 0.14 oz/in <sup>3</sup>     |
| Variable water vapour resistance factor (μ) | -                    | approx. 250 / 8333                                   | approx. 0.75/25 MNs/g               |
| VOC content                                 | -                    | 0 %  | -                                   |



#### A DRY LAYERS : Sd 5 m

maximum protection - vapour control layer to limit the passage of vapour in view of the season when moisture accumulates within the layers

#### (B) HUMID LAYERS : Sd 0,15 m

maximum breathability - breathable mem-

to allow drying during the reverse steam diffusion phenomenon

#### C DRY LAYERS : Sd 5 m

maximum protection for the start of a new year and a new cycle



## **TRANSPARENCY**

Easy to install thanks to the slightly transparent structure, it allows the interception of the underlying structure.

# CLIMA CONTROL NET 160















USA Class2 Class3











## **ENERGY RECONDITIONING**

and excellent security in insulation.

Ideal to increase energy performance for packages and solutions for reconditioning of existing structures.

#### **REINFORCING GRID**

Thanks to its composition, the membrane is not affected by mechanical stresses caused by staples, nails or wear caused by walking.

# **VARIABLE SD**

#### COMPOSITION

top layer non-woven PP fabric

reinforcing layer PE reinforcing grid

middle layer PA functional film

bottom layer non-woven PP fabric

#### CODES AND DIMENSIONS

| CODE       | description              | tape | Н   | L   | А                 | Н    | L    | Α                  |    |
|------------|--------------------------|------|-----|-----|-------------------|------|------|--------------------|----|
|            |                          |      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| CLIMATT160 | CLIMA CONTROL NET 160 TT | TT   | 1,5 | 50  | 75                | 5    | 164  | 807                | 25 |



#### WEAR RESISTANCE

During installation on the roof, mechanical stresses are created due to wear from walking, which the reinforcement grid can compensate for.

#### **SMART**

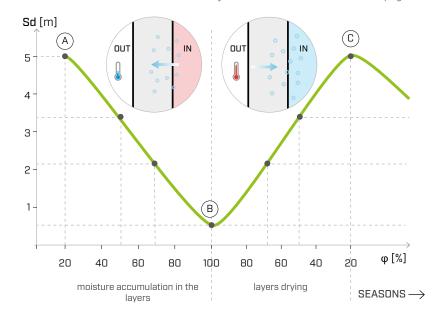
Is breathable when internal relative humidity is too high, and serves as a vapour control layer when internal humidity is at suitable levels.

#### ■ TECHNICAL DATA

| Properties                                      | standard             | value  | value                           |
|---|----------------------|--|---------------------------------|
| Mass per unit area                              | EN 1849-2            | 160 g/m <sup>2</sup>                                   | 0.52 oz/ft <sup>2</sup>         |
| Thickness                                       | EN 1849-2            | 0,5 mm   | 20 mil                          |
| Variable water vapour transmission (Sd)         | EN 1931              | 0,5 / 5 m  | 7 / 0.7 US perm                 |
| Dry/wet cup water vapour transmission           | ASTM E96/ E96M       | 2.86/7.91 US perm<br>153/452 ng/(s·m <sup>2</sup> ·Pa) | -                               |
| Maximum tensile force MD/CD <sup>(1)</sup>      | EN 12311-2           | 400 / 270 N/50mm                                       | 46 / 31 lb/in                   |
| Elongation MD/CD <sup>(1)</sup>                 | EN 12311-2           | 20 / 20 %  | -                               |
| Resistance to nail tearing MD/CD <sup>(1)</sup> | EN 12310-1           | 240 / 250 N  | 54 / 56 lbf                     |
| Watertightness                                  | EN 1928              | conforming   | -                               |
| Temperature resistance                          | -                    | -40 / 80 °C  | -40 / 176 °F                    |
| Reaction to fire                                | EN 13501-1           | class E  | -                               |
| Resistance to penetration of air                | EN 12114             | $0 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$        | 0 cfm/ft <sup>2</sup> at 50Pa   |
| Water vapour resistance:                        |                      |  |                                 |
| - after artificial ageing                       | EN 1296 / EN 1931    | conforming   | -                               |
| - in the presence of alkalis                    | EN 1847 / EN 12311-2 | npd  | -                               |
| Thermal conductivity (λ)                        | -                    | 0,3 W/(m·K)  | 0.17 BTU/h·ft·°F                |
| Specific heat                                   | -                    | 1800 J/(kg·K)  | =                               |
| Density   | -                    | approx. 320 kg/m <sup>3</sup>                          | approx. 0.18 oz/in <sup>3</sup> |
| Variable water vapour resistance factor (μ)     | -                    | approx. 1000 / 10000                                   | approx. 2.5/25 MNs/g            |
| VOC content                                     | -                    | 0 %  | -                               |
| UV stability <sup>(2)</sup>                     | EN 13859-1/2         | 3 months   | -                               |
| Exposure to weather <sup>(2)</sup>              | -                    | 4 weeks  | -                               |
| Water column                                    | ISO 811              | > 250 cm   | > 98 in                         |

<sup>(1)</sup> Average values obtained from laboratory tests. Consult the Declaration of Performance for the minimum values.

<sup>(2)</sup> For the correlation between laboratory tests and actual conditions, see page 199.



#### (A) DRY LAYERS: Sd 5 m

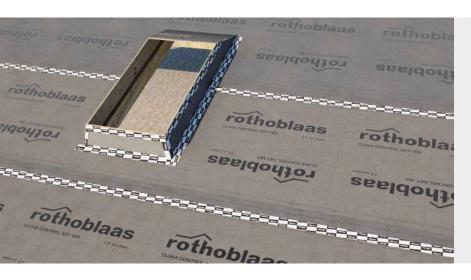
maximum protection - vapour control layer to limit the passage of vapour in view of the season when moisture accumulates within the layers

#### B HUMID LAYERS : Sd 0,5 m

maximum breathability - breathable membrane to allow drying during the reverse steam diffusion phenomenon

#### C DRY LAYERS : Sd 5 m

maximum protection for the start of a new year and a new cycle



## HYGROMETRIC PROPERTIES

The special PA film gives the product the ability to adapt to the hygrometric conditions of the building. If the membrane comes into contact with high humidity levels, it transforms from a vapour control layer into a breathable product, guaranteeing that the structure remains dry.

# VAPOR NET 110





















## COMPOSITION

top layer PE vapour control film

reinforcing layer PE reinforcing grid

bottom layer non-woven PP fabric



#### **TECHNICAL DATA**

| Properties                         | standard             | value  | value                               |
|------------------------------------|----------------------|--|-------------------------------------|
| Mass per unit area                 | EN 1849-2            | 110 g/m <sup>2</sup>                                 | 0.36 oz/ft <sup>2</sup>             |
| Thickness                          | EN 1849-2            | 0,3 mm   | 12 mil                              |
| Water vapour transmission (Sd)     | EN 1931              | 5 m  | 0.7 US perm                         |
| Maximum tensile force MD/CD        | EN 12311-2           | > 200 / 250 N/50mm                                   | 23 / 29 lb/in                       |
| Elongation MD/CD                   | EN 12311-2           | > 25 / 25 %  | -                                   |
| Resistance to nail tearing MD/CD   | EN 12310-1           | > 170 / 170 N  | 38 / 38 lbf                         |
| Watertightness                     | EN 1928              | conforming   | -                                   |
| Temperature resistance             |                      | -40 / 80 °C  | -40 / 176 °F                        |
| Reaction to fire                   | EN 13501-1           | class E  | -                                   |
| Resistance to penetration of air   | EN 12114             | $< 0.02 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.001 cfm/ft <sup>2</sup> at 50Pa |
| Water vapour resistance:           |                      |  |                                     |
| - after artificial ageing          | EN 1296 / EN 1931    | conforming   | -                                   |
| - in the presence of alkalis       | EN 1847 / EN 12311-2 | npd  | -                                   |
| Thermal conductivity (λ)           | -                    | 0,3 W/(m·K)  | 0.17 BTU/h·ft·°F                    |
| Specific heat                      | -                    | 1800 J/(kg·K)  | -                                   |
| Density                            | -                    | approx. 370 kg/m <sup>3</sup>                        | approx. 0.21 oz/in <sup>3</sup>     |
| Water vapour resistance factor (μ) | -                    | approx. 16700  | approx. 25 MNs/g                    |
| VOC content                        | -                    | 0 %  | -                                   |
| UV stability <sup>(1)</sup>        | EN 13859-1/2         | 3 months   | -                                   |
| Exposure to weather <sup>(1)</sup> | -                    | 2 weeks  | -                                   |
| Water column                       | ISO 811              | > 250 cm   | > 98 in                             |

 $<sup>^{(1)}</sup>$  For the correlation between laboratory tests and actual conditions, see page 199.

| CODE | description   | tape | Н   | L   | Α       | Н    | L    | Α                  |    |
|------|---------------|------|-----|-----|---------|------|------|--------------------|----|
|      |               |      | [m] | [m] | $[m^2]$ | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| V110 | VAPOR NET 110 | -    | 1,5 | 50  | 75      | 5    | 164  | 807                | 36 |

# **I VAPOR 140**



## VAPOUR CONTROL MEMBRANE

















## COMPOSITION

top layer non-woven PP fabric

middle layer vapour control PP film

bottom layer non-woven PP fabric



#### **■ TECHNICAL DATA**

| Properties                         | standard             | value  | value                               |
|------------------------------------|----------------------|--|-------------------------------------|
| Mass per unit area                 | EN 1849-2            | 140 g/m <sup>2</sup>                                 | 0.46 oz/ft²                         |
| Thickness                          | EN 1849-2            | 0,45 mm  | 18 mil                              |
| Water vapour transmission (Sd)     | EN 1931              | 10 m   | 0.35 US perm                        |
| Maximum tensile force MD/CD        | EN 12311-2           | > 230 / 180 N/50mm                                   | 26 / 21 lb/in                       |
| Elongation MD/CD                   | EN 12311-2           | > 35 / 40 %  | -                                   |
| Resistance to nail tearing MD/CD   | EN 12310-1           | > 125 / 145 N  | 28 / 33 lbf                         |
| Watertightness                     | EN 1928              | conforming   | -                                   |
| Temperature resistance             | -                    | -20 / 80 °C  | -4 / 176 °F                         |
| Reaction to fire                   | EN 13501-1           | class F  | -                                   |
| Resistance to penetration of air   | EN 12114             | $< 0.02 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.001 cfm/ft <sup>2</sup> at 50Pa |
| Water vapour resistance:           |                      |  |                                     |
| - after artificial ageing          | EN 1296 / EN 1931    | conforming   | -                                   |
| - in the presence of alkalis       | EN 1847 / EN 12311-2 | npd  | -                                   |
| Thermal conductivity (λ)           | -                    | 0,3 W/(m·K)  | 0.17 BTU/h·ft·°F                    |
| Specific heat                      | -                    | 1800 J/(kg·K)  | -                                   |
| Density                            | -                    | approx. 300 kg/m <sup>3</sup>                        | approx. 0.17 oz/in <sup>3</sup>     |
| Water vapour resistance factor (μ) | -                    | approx. 25000  | approx. 50 MNs/g                    |
| VOC content                        | -                    | 0 %  | -                                   |
| UV stability <sup>(1)</sup>        | EN 13859-1/2         | 3 months   | -                                   |
| Exposure to weather <sup>(1)</sup> | -                    | 3 weeks  | -                                   |
| Water column                       | ISO 811              | > 250 cm   | > 98 in                             |

 $<sup>^{(1)}</sup>$  For the correlation between laboratory tests and actual conditions, see page 199.

| CODE | description | tape | Н   | L   | Α       | Н    | L    | Α                  |    |
|------|-------------|------|-----|-----|---------|------|------|--------------------|----|
|      |             |      | [m] | [m] | $[m^2]$ | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| V140 | VAPOR 140   | -    | 1,5 | 50  | 75      | 5    | 164  | 807                | 30 |

# **I VAPOR 150**

# **(**E

## VAPOUR CONTROL MEMBRANE

















#### COMPOSITION

top layer non-woven PP fabric

middle layer vapour control PP film

bottom layer non-woven PP fabric



#### **■ TECHNICAL DATA**

| <b>=</b>                           |                      |  |                                     |
|------------------------------------|----------------------|--|-------------------------------------|
| Properties                         | standard             | value  | value                               |
| Mass per unit area                 | EN 1849-2            | 150 g/m <sup>2</sup>                                 | 0.49 oz/ft <sup>2</sup>             |
| Thickness                          | EN 1849-2            | 0,5 mm   | 20 mil                              |
| Water vapour transmission (Sd)     | EN 1931              | 13 m   | 0.269 US perm                       |
| Maximum tensile force MD/CD        | EN 12311-2           | > 250 / 200 N/50mm                                   | 29 / 23 lb/in                       |
| Elongation MD/CD                   | EN 12311-2           | > 35 / 40 %  | -                                   |
| Resistance to nail tearing MD/CD   | EN 12310-1           | > 130 / 150 N  | 29 / 34 lbf                         |
| Watertightness                     | EN 1928              | conforming   | -                                   |
| Temperature resistance             | -                    | -20 / 80 °C  | -4 / 176 °F                         |
| Reaction to fire                   | EN 13501-1           | class E  | -                                   |
| Resistance to penetration of air   | EN 12114             | $< 0.02 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.001 cfm/ft <sup>2</sup> at 50Pa |
| Water vapour resistance:           |                      |  |                                     |
| - after artificial ageing          | EN 1296 / EN 1931    | conforming   | -                                   |
| - in the presence of alkalis       | EN 1847 / EN 12311-2 | npd  | -                                   |
| Thermal conductivity (λ)           | -                    | 0,3 W/(m·K)  | 0.17 BTU/h·ft·°F                    |
| Specific heat                      | -                    | 1800 J/(kg·K)  | -                                   |
| Density                            | -                    | approx. 300 kg/m <sup>3</sup>                        | approx. 0.17 oz/in <sup>3</sup>     |
| Water vapour resistance factor (μ) | -                    | approx. 26000  | approx. 65 MNs/g                    |
| VOC content                        | -                    | 0 %  | -                                   |
| UV stability <sup>(1)</sup>        | EN 13859-1/2         | 3 months   | -                                   |
| Exposure to weather <sup>(1)</sup> | -                    | 3 weeks  | -                                   |
| Water column                       | ISO 811              | > 250 cm   | > 98 in                             |

 $<sup>^{(1)}</sup>$  For the correlation between laboratory tests and actual conditions, see page 199.

| CODE   | description  | tape | Н   | L   | Α       | Н    | L    | Α                  |    |
|--------|--------------|------|-----|-----|---------|------|------|--------------------|----|
|        |              |      | [m] | [m] | $[m^2]$ | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| V150   | VAPOR 150    | -    | 1,5 | 50  | 75      | 5    | 164  | 807                | 30 |
| VTT150 | VAPOR 150 TT | TT   | 1,5 | 50  | 75      | 5    | 164  | 807                | 30 |

# VAPOR NET 180





















#### COMPOSITION

top layer non-woven PP fabric

reinforcing layer reinforcing PP grid

middle layer

PE vapour control film

bottom layer

non-woven PP fabric



#### ■ TECHNICAL DATA

| Properties                                      | standard             | value  | value                               |
|---|----------------------|--|-------------------------------------|
| Mass per unit area                              | EN 1849-2            | 180 g/m <sup>2</sup>                                 | 0.59 oz/ft <sup>2</sup>             |
| Thickness                                       | EN 1849-2            | 0,5 mm   | 20 mil                              |
| Water vapour transmission (Sd) <sup>(1)</sup>   | EN 1931              | 10 m   | 0.35 US perm                        |
| Maximum tensile force MD/CD <sup>(1)</sup>      | EN 12311-2           | 320 / 300 N/50mm                                     | 37 / 34 lb/inch                     |
| Elongation MD/CD <sup>(1)</sup>                 | EN 12311-2           | 10 / 10 %  | -                                   |
| Resistance to nail tearing MD/CD <sup>(1)</sup> | EN 12310-1           | 250 / 290 N  | 56 / 65 lbf                         |
| Watertightness                                  | EN 1928              | conforming   | -                                   |
| Temperature resistance                          | -                    | -40 / 80 °C  | -40 / 176 F                         |
| Reaction to fire                                | EN 13501-1           | class E  | -                                   |
| Resistance to penetration of air                | EN 12114             | $< 0.02 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.001 cfm/ft <sup>2</sup> at 50Pa |
| Water vapour resistance:                        |                      |  |                                     |
| - after artificial ageing                       | EN 1296 / EN 1931    | conforming   | -                                   |
| - in the presence of alkalis                    | EN 1847 / EN 12311-2 | npd  | -                                   |
| Thermal conductivity (λ)                        | -                    | 0,4 W/(m·K)  | 0.17 BTU/h·ft·°F                    |
| Specific heat                                   | -                    | 1700 J/(kg·K)  | -                                   |
| Density   | -                    | approx. 360 kg/m <sup>3</sup>                        | approx. 0.2 oz/in <sup>3</sup>      |
| Water vapour resistance factor (μ)              | -                    | approx. 20000  | approx. 50 MNs/g                    |
| VOC content                                     | -                    | 0 %  | -                                   |
| UV stability <sup>(2)</sup>                     | EN 13859-1/2         | 3 months   | -                                   |
| Exposure to weather <sup>(2)</sup>              | -                    | 3 weeks  | -                                   |

<sup>(1)</sup> Average values obtained from laboratory tests. Consult the Declaration of Performance for the minimum values.

| CODE   | description      | tape | Н   | L   | Α       | Н    | L    | Α                  |    |
|--------|------------------|------|-----|-----|---------|------|------|--------------------|----|
|        |                  |      | [m] | [m] | $[m^2]$ | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| V180   | VAPOR NET 180    | -    | 1,5 | 50  | 75      | 5    | 164  | 807                | 25 |
| VTT180 | VAPOR NET 180 TT | TT   | 1,5 | 50  | 75      | 5    | 164  | 807                | 25 |

<sup>(2)</sup> For the correlation between laboratory tests and actual conditions, see page 199.

# VAPOR EVO 190





















#### **NEW GENERATION**

**MEMBRANE** 

It is part of the EVO membrane family because it contains a special film that ensures durability and high UV stability.

HIGH PERFORMANCE VAPOUR CONTROL

#### **UV STABILITY**

Its formulation achieves UV stability for up to 6 months, offering maximum protection to the roof and underlying structure.

#### HIGH THERMAL RESISTANCE

The special mix of the functional film allows the product to guarantee its performance even when subjected to high thermal stress in extreme climatic conditions.

## COMPOSITION

top layer

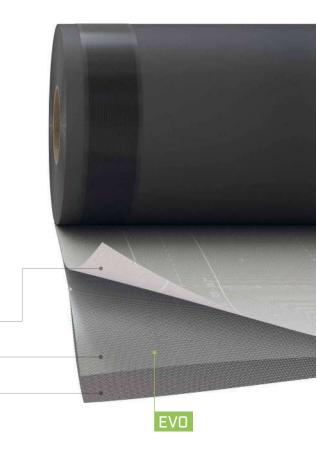
non-woven PP fabric

middle layer

EVO PE functional film

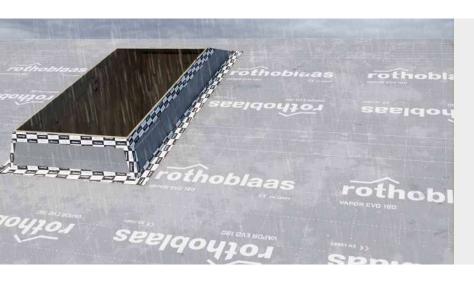
bottom layer

non-woven PP fabric



#### CODES AND DIMENSIONS

| CODE      | description      | tape | Н   | L   | Α                 | Н    | L    | Α                  |    |
|-----------|------------------|------|-----|-----|-------------------|------|------|--------------------|----|
|           |                  |      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| VEVO190   | VAPOR EVO 190    | -    | 1,5 | 50  | 75                | 5    | 164  | 807                | 25 |
| VTTEVO190 | VAPOR EVO 190 TT | TT   | 1,5 | 50  | 75                | 5    | 164  | 807                | 25 |



#### **PROTECTION**

Maximum protection against wear and hard rain during installation/construction.

The monolithic film ensures impermeability even under high mechanical wear and tear and contact with aggressive chemicals.

#### SECURE SEALING

Installation and sealant can be done perfectly, thanks to integrated double tape and the adherence offered by the lower support fabric.

#### ■ TECHNICAL DATA

| Properties                                      | standard             | value   | value                           |
|---|----------------------|---|---------------------------------|
| Mass per unit area                              | EN 1849-2            | 190 g/m <sup>2</sup>                            | 0.62 oz/ft <sup>2</sup>         |
| Thickness                                       | EN 1849-2            | 0,6 mm  | 24 mil                          |
| Water vapour transmission (Sd)                  | EN 1931              | 5 m   | 0.699 US perm                   |
| Maximum tensile force MD/CD <sup>(1)</sup>      | EN 12311-2           | 480 / 500 N/50mm                                | 55 / 57 lb/in                   |
| Elongation MD/CD <sup>(1)</sup>                 | EN 12311-2           | 65 / 65 %                                       | -                               |
| Resistance to nail tearing MD/CD <sup>(1)</sup> | EN 12310-1           | 265 / 320 N                                     | 60 / 72 lbf                     |
| Watertightness                                  | EN 1928              | conforming                                      | -                               |
| Temperature resistance                          | -                    | 40 / 100 °C                                     | 104 / 212 F                     |
| Reaction to fire                                | EN 13501-1           | class E   | -                               |
| Resistance to penetration of air                | EN 12114             | $0 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | 0 cfm/ft <sup>2</sup> at 50Pa   |
| Water vapour resistance:                        |                      |   |                                 |
| - after artificial ageing                       | EN 1296 / EN 1931    | conforming                                      | -                               |
| - in the presence of alkalis                    | EN 1847 / EN 12311-2 | npd   | -                               |
| Thermal conductivity (λ)                        | -                    | 0,3 W/(m·K)                                     | 0.17 BTU/h·ft·°F                |
| Specific heat                                   | -                    | 1700 J/(kg·K)                                   | -                               |
| Density   | -                    | approx. 316 kg/m <sup>3</sup>                   | approx. 0.18 oz/in <sup>3</sup> |
| Water vapour resistance factor (μ)              | -                    | approx. 8300                                    | approx. 25 MNs/g                |
| VOC content                                     | -                    | 0 %   | -                               |
| UV stability <sup>(2)</sup>                     | EN 13859-1/2         | 6 months  | -                               |
| Exposure to weather <sup>(2)</sup>              | -                    | 10 weeks  | -                               |
| Water column                                    | ISO 811              | 600 cm  | 236 in                          |

 $<sup>^{(1)}</sup>$  Average values obtained from laboratory tests. Consult the Declaration of Performance for the minimum values.  $^{(2)}$  For the correlation between laboratory tests and actual conditions, see page 199.

#### RELATED PRODUCTS



SMART BAND page 80



NAIL PLASTER page 126



LIZARD page 325



## THERMAL AND CHEMICAL STABILITY

Resistant up to 100°C, it is not affected by chemicals that it may come into contact with during roof work or through pollution in the air.

# **VAPOR 225**







# VAPOUR CONTROL MEMBRANE



CH V.v.u. V.v.o.>90mm

DTU 31.2 Bs dve E1 Sd2 TR3









#### RELIABLE

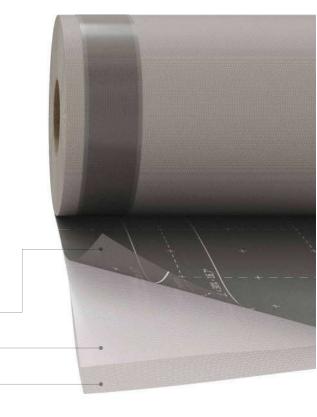
The mass per unit area of the membrane provides mechanical strength and protection during construction.

#### **PROTECTION**

It is also suitable for applications on uneven and rough supports, which could damage lighter vapour control layers.

#### COST/PERFORMANCE

Cost-effective membrane, ensuring high performance and protection against weathering.



## COMPOSITION

top layer non-woven PP fabric

middle layer vapour control PP film

bottom layer non-woven PP fabric

#### CODES AND DIMENSIONS

| CODE   | description  | tape | Н   | L   | Α       | Н    | L    | Α                  |    |
|--------|--------------|------|-----|-----|---------|------|------|--------------------|----|
|        |              |      | [m] | [m] | $[m^2]$ | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| V225   | VAPOR 225    | -    | 1,5 | 50  | 75      | 5    | 164  | 807                | 20 |
| VTT225 | VAPOR 225 TT | TT   | 1,5 | 50  | 75      | 5    | 164  | 807                | 20 |



## SECURE SEALING

The TT version offers fast installation and professional sealing thanks to the integrated double tape.

#### **FLEXIBILITY**

Although the membrane is very thick and resistant, its composition ensures great flexibility in processing without the risk of material wear.

#### ■ TECHNICAL DATA

| Properties                         | standard             | value  | value                               |
|------------------------------------|----------------------|--|-------------------------------------|
| Mass per unit area                 | EN 1849-2            | 225 g/m <sup>2</sup>                                 | 0.74 oz/ft <sup>2</sup>             |
| Thickness                          | EN 1849-2            | 0,8 mm   | 31 mil                              |
| Water vapour transmission (Sd)     | EN 1931              | 4 m  | 0.874 US perm                       |
| Maximum tensile force MD/CD        | EN 12311-2           | > 380 / 300 N/50mm                                   | > 43 / 34 lb/in                     |
| Elongation MD/CD                   | EN 12311-2           | 60 / 80 %  | -                                   |
| Resistance to nail tearing MD/CD   | EN 12310-1           | > 225 / 300 N  | > 51 / 67 lbf                       |
| Watertightness                     | EN 1928              | conforming   | -                                   |
| Temperature resistance             | -                    | -20 / 80 °C  | -4 / 176 °F                         |
| Reaction to fire                   | EN 13501-1           | class E  | -                                   |
| Resistance to penetration of air   | EN 12114             | $< 0.02 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.001 cfm/ft <sup>2</sup> at 50Pa |
| Water vapour resistance:           |                      |  |                                     |
| - after artificial ageing          | EN 1296 / EN 1931    | conforming   | -                                   |
| - in the presence of alkalis       | EN 1847 / EN 12311-2 | npd  | -                                   |
| Thermal conductivity (λ)           | -                    | 0,3 W/(m·K)  | 0.17 BTU/h·ft·°F                    |
| Specific heat                      | -                    | 1800 J/(kg·K)  | -                                   |
| Density                            | -                    | approx. 250 kg/m <sup>3</sup>                        | approx. 0.14 oz/in <sup>3</sup>     |
| Water vapour resistance factor (μ) | -                    | approx. 5000   | approx. 20 MNs/g                    |
| VOC content                        | -                    | 0 %  | -                                   |
| UV stability <sup>(1)</sup>        | EN 13859-1/2         | 3 months   | -                                   |
| Exposure to weather <sup>(1)</sup> | -                    | 3 weeks  | -                                   |
| Water column                       | ISO 811              | > 500 cm   | > 197 in                            |

<sup>(1)</sup> For the correlation between laboratory tests and actual conditions, see page 199.

#### ■ RELATED PRODUCTS





NAIL PLASTER page 126



page 325

WEAR RESISTANCE

rothoblaas seeld rothoblaas rothoblaas rothoblaas seeld rothoblaas rothoblaas rothoblaas seeld rothoblaas roth

Thanks to its high mass per unit area, it ranks among the most massive vapour control layers on the market, providing protection for common construction phases.

# VAPOR ADHESIVE 260

## SELF-ADHESIVE VAPOUR CONTROL **MEMBRANE**

















#### SELF-ADHESIVE

Thanks to the innovative formula of the new generation glue, the membrane ensures good adhesion even on rough OSB.

#### **SECURE SEALING**

The adhesive surface prevents the formation of airflow behind the membrane in case of accidental breakage or failure to seal.

#### **VERSATILE**

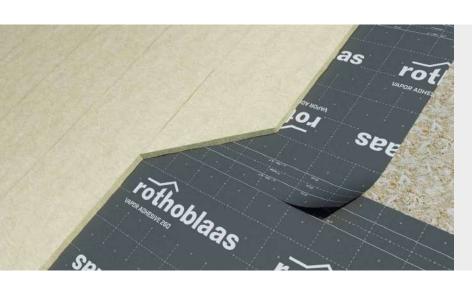
It offers a solution both as protection during construction and as an effective and safe vapour control membrane.

#### COMPOSITION

top layer non-woven PP fabric middle layer vapour control PP film bottom layer non-woven PP fabric acrylate dispersion without solvents release liner precut removable plastic film

#### CODES AND DIMENSIONS

| CODE   | description               | liner     | Н    | L   | Α                 | Н    | L    | Α                  |    |
|--------|---------------------------|-----------|------|-----|-------------------|------|------|--------------------|----|
|        |                           | [mm]      | [m]  | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| VA260  | VAPOR ADHESIVE 260        | 725 / 725 | 1,45 | 50  | 72,5              | 4,8  | 164  | 780                | 16 |
| VAS260 | VAPOR ADHESIVE 260 STRIPE | 180 / 180 | 0,36 | 50  | 18                | 1.18 | 164  | 194                | -  |



#### **RAPIDITY**

The fully self-adhesive surface allows fast and safe installation and does not compromise the performance of the product.

#### CONSTRUCTION SITE

During construction, it is essential to protect the structure, especially if it remains visible once the building is completed: VAPOR ADHESIVE 260 offers excellent protection.

#### ■ TECHNICAL DATA

| Properties                          | standard       | value  | value                               |
|-------------------------------------|----------------|--|-------------------------------------|
| Mass per unit area                  | EN 1849-2      | 260 g/m <sup>2</sup>                                 | 0.85 oz/ft <sup>2</sup>             |
| Thickness                           | EN 1849-2      | approx. 0,6 mm                                       | approx. 24 mil                      |
| Water vapour transmission (Sd)      | EN 1931        | 19 m   | 0.184 US perm                       |
| Water vapour transmission (dry cup) | ASTM E96/ E96M | 0.2 US perm  | -                                   |
| Maximum tensile force MD/CD         | EN 12311-2     | > 250 / 200 N/50mm                                   | 43 / 34 lb/in                       |
| Resistance to nail tearing MD/CD    | EN 12310-1     | > 130 / 150 N  | 29 / 34 lbf                         |
| Watertightness                      | EN 1928        | conforming   | -                                   |
| Temperature resistance              | -              | -20 / 80 °C  | -4 / 176 °F                         |
| Resistance to penetration of air    | EN 12114       | $< 0.02 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.001 cfm/ft <sup>2</sup> at 50Pa |
| Thermal conductivity (λ)            | -              | approx. 0,3 W/(m K)                                  | 0.17 BTU/h·ft·°F                    |
| Specific heat                       | -              | approx. 1800 J/(kg·K)                                | -                                   |
| Density                             | -              | approx. 300 kg/m <sup>3</sup>                        | approx. 0.17 oz/in <sup>3</sup>     |
| Water vapour resistance factor (μ)  | -              | approx. 31600  | approx. 95 MNs/g                    |
| Joint strength                      | EN 12317-2     | 112 N/50mm   | 13 lb/in                            |
| UV stability <sup>(1)</sup>         | EN 13859-1/2   | 2 months   | -                                   |
| Exposure to weather <sup>(1)</sup>  | -              | 3 weeks  | -                                   |
| Adhesion strength on steel at 180°  | EN 12316-2     | 12 N/cm  | 7 lb/in                             |
| Storage temperature                 | -              | 5 / 25 °C  | 41/77 °F                            |
| Application temperature             | -              | -5 / 35 °C   | 23 / 95 °F                          |

 $<sup>^{(1)}</sup>$  For the correlation between laboratory tests and actual conditions, see page 199.

Available in different configurations on request. It is possible to customise the mass per unit area of the membrane, the amount of acrylic glue, the size and the pre-cut of the liner.

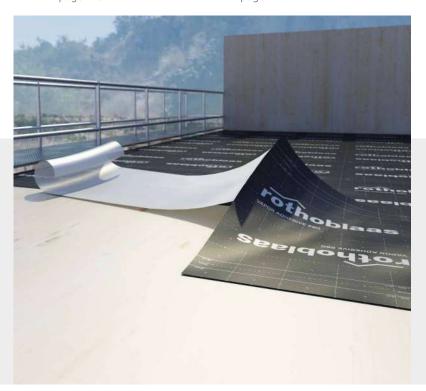
#### ■ RELATED PRODUCTS



BARRIER NET ADHESIVE 200 page 210



TRASPIR ADHESIVE 260 page 276



#### SPECIAL GLUE

The acrylic dispersion glue has a specific formulation to prevent altering the vapour control membrane functions of the functional film inside the membrane.

## ■ RECOMMENDATIONS FOR INSTALLATION

#### APPLICATION ON CEILING













SEALING FASTENING SYSTEMS

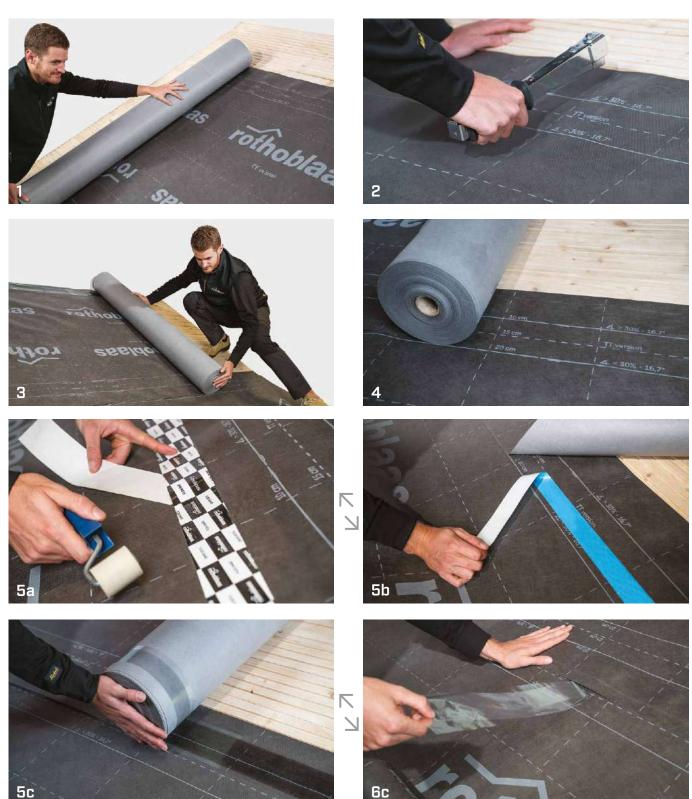




- 1 SPEEDY BAND 300, FLEXI BAND, PLASTER BAND
- 2 PROTECT, BYTUM BAND PRIMER SPRAY, PRIMER

# I RECOMMENDATIONS FOR INSTALLATION: CLIMA CONTROL 160 AND **VAPOR**

APPLICATION ON ROOF - EXTERNAL SIDE



- 1 CLIMA CONTROL 160, VAPOR NET 110, VAPOR 140, VAPOR 150, VAPOR 150, VAVAPOR NET 180, VAPOR EVO 190, VAPOR 225
- 2 HAMMER STAPLER 47, HAMMER STAPLER 22, HAND STAPLER, STAPLES
- $\mathbf{5a}$   $\overset{\mathsf{EASY}}{\mathsf{BAND}}, \mathsf{SPEEDY}$   $\mathsf{BAND}, \mathsf{FLEXI}$   $\mathsf{BAND}, \mathsf{FLEXI}$   $\mathsf{BAND}$  UV,  $\mathsf{SOLID}$   $\mathsf{BAND}, \mathsf{PLASTER}$   $\mathsf{BAND}$  ROLLER
- **5b** DOUBLE BAND, SUPRA BAND, BUTYL BAND OUTSIDE GLUE

# BREATHABLE

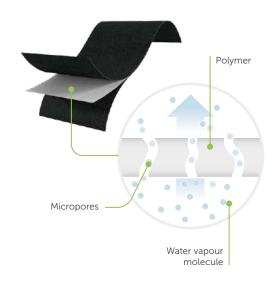
# BREATHABLE

| TRASPIR 95 HIGHLY BREATHABLE MEMBRANE FOR WALLS                               | TRASPIR EVO UV 210 HIGHLY BREATHABLE MONOLITHIC MEMBRANE RESISTANT TO UV RAYS |
|---|---|
| TRASPIR 110 HIGHLY BREATHABLE MEMBRANE253                                     | TRASPIR EVO 220 HIGHLY BREATHABLE MONOLITHIC MEMBRANE274                      |
| TRASPIR EVO UV 115 HIGHLY BREATHABLE MONOLITHIC MEMBRANE RESISTANT TO UV RAYS | TRASPIR ADHESIVE 260 HIGHLY BREATHABLE SELF-ADHESIVE MEMBRANE                 |
| TRASPIR ALU 120 HIGHLY BREATHABLE MEMBRANE                                    | TRASPIR DOUBLE NET 270 HIGHLY BREATHABLE MEMBRANE                             |
| TRASPIR 135 HIGHLY BREATHABLE MEMBRANE257                                     | TRASPIR EVO 300 HIGHLY BREATHABLE MONOLITHIC MEMBRANE282                      |
| TRASPIR 150 HIGHLY BREATHABLE MEMBRANE  | TRASPIR DOUBLE EVO 340  MONOLITHIC AND MICROPOROUS BREATHABLE MEMBRANE        |
| TRASPIR NET 160 HIGHLY BREATHABLE MEMBRANE                                    | TRASPIR WELD EVO 360  WELDABLE MONOLITHIC BREATHABLE MEMBRANE288              |
| TRASPIR EVO 160 HIGHLY BREATHABLE MONOLITHIC MEMBRANE262                      | TRASPIR ALU FIRE A2 430  REFLECTIVE HIGHLY BREATHABLE MEMBRANE                |
| TRASPIR 200 HIGHLY BREATHABLE MEMBRANE  | TRASPIR METAL 3D MATS FOR METAL ROOFS   |
| TRASPIR ALU 200 REFLECTIVE HIGHLY BREATHABLE MEMBRANE                         | 3D MATS FOR METAL ROOFS294  |
| TRASPIR EVO SEAL 200 HIGHLY BREATHABLE MONOLITHIC MEMBRANE, PERFORATION-PROOF |   |
| TRASPIR FELT EVO UV 210  BREATHABLE MONOLITHIC MEMBRANE RESISTANT TO UV RAYS  |   |

# I 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.

#### MICROPOROUS MEMBRANES



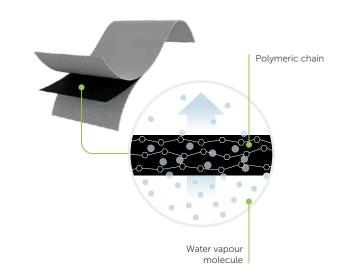
#### **CHARACTERISTICS**

| Thermal stability                    | •00                        |
|--------------------------------------|----------------------------|
| Durability and stability with ageing | $\bullet \bullet \bigcirc$ |
| UV stability                         | $\bullet \bullet \bigcirc$ |
| Chemical stability                   | •00                        |
| Low reaction to fire                 | •00                        |
| Breathability (water vapour)         | •••                        |
| Watertightness                       | $\bullet \bullet \bigcirc$ |
| Airtightness                         | $\bullet \bullet \bigcirc$ |
| Resistance to heavy rain             | $\bullet \bullet \bigcirc$ |
| Mechanical resistance                | •••                        |
| Slipping resistance                  | •••                        |
| Resistance to pollutants             | 000                        |

Membrane with functional microporous layer, obtained through mechanical processing during the production. Permeability to water vapour is entrusted to the capillary principle: the water molecule passes through the micropores in the functional film, enclosed in one or two protective layers.

Rothoblaas offers:TRASPIR 110, TRASPIR 150, TRASPIR 200.

#### **MONOLITHIC MEMBRANES**



#### **CHARACTERISTICS**

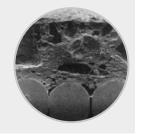
| Thermal stability                    | •••                        |
|--------------------------------------|----------------------------|
| Durability and stability with ageing | •••                        |
| UV stability                         | •••                        |
| Chemical stability                   | •••                        |
| Low reaction to fire                 | $\bullet \bullet \bigcirc$ |
| Breathability (water vapour)         | •••                        |
| Watertightness                       | •••                        |
| Airtightness                         | •••                        |
| Resistance to heavy rain             | •••                        |
| Mechanical resistance                | •••                        |
| Slipping resistance                  | $\bullet \bullet \bigcirc$ |
| Resistance to pollutants             | •••                        |

Membranes with a homogeneous and continuous functional layer. The permeance of monolithic membranes is provided by the ability of the polymer of which they are composed to make a chemical interaction with water molecules. Some polymers, in fact, are able to activate a chemical interaction with water molecules and therefore to be crossed through, thus becoming breathable.

Rothoblaas offers: TRASPIR EVO 160, TRASPIR EVO 220, TRASPIR EVO 300.

Microscope image of a microporous membrane section.

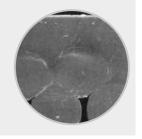
Upper part: microporous film.
Lower part: support and protection fibre filaments.



Microscope image of a monolithic membrane section. **Upper part:** monolithic film.

Lower part: monotonic num.

Lower part: support and protection fibre filaments.

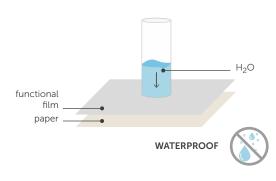


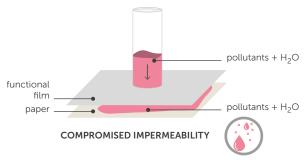
Microporous films are made from hydrophobic polymers, which are themselves incapable of interacting with water and are generally more rigid. They require special processing to allow water to pass through them. This makes them more susceptible to pollutants.

Monolithic films are made from hydrophilic polymers, which are able to interact chemically with water and are generally more elastic.

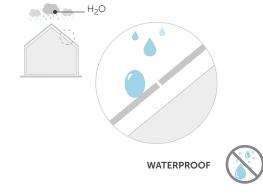
#### MICROPOROUS MEMBRANES

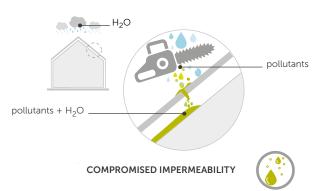
#### LABORATORY TEST





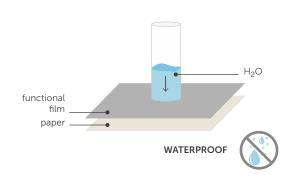
#### CASE ON SITE

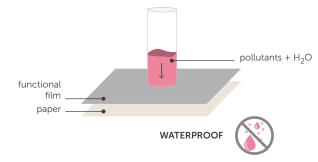




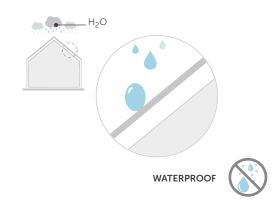
#### **MONOLITHIC MEMBRANES**

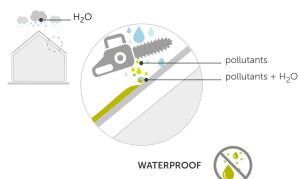
#### LABORATORY TEST





#### CASE ON SITE



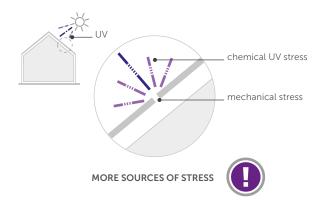


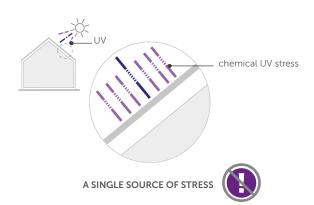
#### MICROPOROUS MEMBRANES

#### MONOLITHIC MEMBRANES

#### RESISTANCE TO ULTRAVIOLET RADIATION

#### 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. If a microporous membrane is exposed to ultraviolet radiation, chemical stress is added to the mechanical stress. Respecting the maximum UV exposure of the membrane is important in order not to compromise the durability of the functional film.

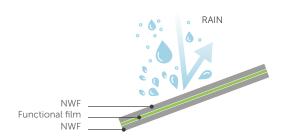
No mechanical or thermal stresses are created in the production process of monolithic films. Therefore, when a monolithic membrane is exposed to ultraviolet radiation, this is the only source of stress for the functional film and degradation is less than it would be for a microporous film. The UV resistance of monolithic membranes is generally higher. However, it is important to respect the maximum UV exposure of the membrane in order not to compromise the durability of the functional film.

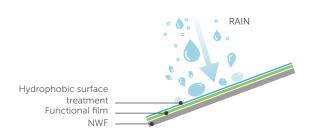
#### WATER REPELLENCY

#### 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 (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).





## ■ MATERIALS, PROPERTIES AND TECHNOLOGIES

The different characteristics of the products depend on production technology and raw materials used, which are generally VOC and solvent-free. Below is a list of polymers used in Rothoblaas products, and their relative specifications:

| RAW MATERIAL USED<br>FOR FUNCTIONAL FILM  | STRENGTHS   | FINISHED<br>PRODUCT TECHNOLOGY           | ROTHOBLAAS<br>PRODUCTS USED IN   |
|---|---|--|--|
| Acrylic                                   | <ul><li>Thermal stability</li><li>UV stability</li><li>Low reaction to fire</li></ul>                           | Monolithic, spread in 2 layers           | Breathable and highly breathable<br>membranes<br>(TRASPIR EVO 300)                                   |
| Thermoplastic polyurethane<br>(TPU or PU) | <ul><li>Thermal stability</li><li>Chemical stability</li><li>Flexibility and workability</li><li>UV</li></ul>   | Monolithic, spread in 2 or 3 layers      | Breathable and highly breathable<br>membranes<br>(TRASPIR WELD EVO 360)                              |
| Polyamide (PA)                            | <ul> <li>Variable resistance to penetration of water vapour</li> <li>Resistance to high temperatures</li> </ul> | Monolithic, spread in 2 or 3 layers      | Membrane with variable vapour diffusion (CLIMA CONTROL 80)   |
| Thermoplastic polyester (TPE)             | <ul><li> UV stability</li><li> Thermal stability</li><li> Mechanical resistance</li></ul>                       | Monolithic, 3 layers                     | Breathable and highly breathable<br>membranes<br>(TRASPIR EVO 220)                                   |
| Polyethylene (PE)                         | <ul><li>Dimensional stability</li><li>Chemical stability</li></ul>  | Monolithic, 2 or 3 layers                | Vapour control membranes<br>(BARRIER SD40), sheaths for<br>foundation waterproofing<br>(FLOOR RADON) |
| Polypropylene (PP)                        | <ul><li>Mechanical resistance</li><li>Flexibility and workability</li><li>Thermal stability</li></ul>           | Microporous<br>Monolithic, 2 or 3 layers | Highly breathable membranes<br>(TRASPIR 150)<br>Vapour control layers<br>(VAPOR 150)                 |

| RAW MATERIAL USED FOR SUPPORT OR REINFORCING LAYER | STRENGTHS  | FUNCTION  |
|--|--|---|
| Aluminium  | <ul> <li>Reflective</li> <li>Increases resistance to penetration of water vapour</li> </ul>                  | Coating and additive for aluminized products (BARRIER ALU FIRE A2 SD2500) |
| Polypropylene (PP)                                 | <ul><li>Mechanical resistance</li><li>Slipping resistance</li><li>High flexibility and workability</li></ul> | Support or protective layers for microporous or monolithic membranes      |
| Polyester (PL)                                     | <ul><li>Thermal stability</li><li>UV stability</li><li>Mechanical resistance</li><li>Elasticity</li></ul>    | Support for spread monolithic products<br>(TRASPIR EVO UV 210)            |

# TRASPIR 95











## HIGHLY BREATHABLE MEMBRANE FOR WALLS

#### COMPOSITION

top layer non-woven PP fabric

middle layer PP breathable film

bottom layer non-woven PP fabric



#### ■ TECHNICAL DATA

| B P                                |                      | .1   | 1100                                |  |  |
|------------------------------------|----------------------|--|-------------------------------------|--|--|
| Properties                         | standard             | value  | USC conversion                      |  |  |
| Mass per unit area                 | EN 1849-2            | 95 g/m <sup>2</sup>                                  | 0.31 oz/ft <sup>2</sup>             |  |  |
| Thickness                          | EN 1849-2            | 0.4 mm   | 16 mil                              |  |  |
| Water vapour transmission (Sd)     | EN 1931              | 0,02 m   | 174.825 US perm                     |  |  |
| Maximum tensile force MD/CD        | EN 12311-1           | 210 / 120 N/50mm                                     | 24 / 14 lb/in                       |  |  |
| Elongation MD/CD                   | EN 12311-1           | 50 / 90 %  | -                                   |  |  |
| Resistance to nail tearing MD/CD   | EN 12310-1           | 90 / 100 N   | 20 / 22 lbf                         |  |  |
| Watertightness                     | EN 1928              | class W1   | -                                   |  |  |
| Temperature resistance             | -                    | -40 / 80 °C  | -40 / 176 °F                        |  |  |
| Reaction to fire                   | EN 13501-1           | class E  | -                                   |  |  |
| Resistance to penetration of air   | EN 12114             | $< 0.05 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.003 cfm/ft <sup>2</sup> at 50Pa |  |  |
| Thermal conductivity (λ)           | -                    | 0,3 W/(m·K)  | 0.17 BTU/h·ft:°F                    |  |  |
| Specific heat                      | -                    | 1800 J/(kg·K)  | -                                   |  |  |
| Density                            | -                    | approx. 238 kg/m <sup>3</sup>                        | approx. 0.14 oz/in <sup>3</sup>     |  |  |
| Water vapour resistance factor (μ) | -                    | approx. 50   | approx. 0.1 MNs/g                   |  |  |
| VOC content                        | -                    | 0 %  | -                                   |  |  |
| UV stability <sup>(1)</sup>        | EN 13859-1/2         | 3 months   | -                                   |  |  |
| Exposure to weather <sup>(1)</sup> | -                    | 2 weeks  | -                                   |  |  |
| After ageing:                      |                      |  |                                     |  |  |
| - watertightness                   | EN 1297 / EN 1928    | class W1   | -                                   |  |  |
| - maximum tensile force MD/CD      | EN 1297 / EN 12311-1 | 150 / 90 N/50mm                                      | 22 / 22 lb/in                       |  |  |
| - elongation                       | EN 1297 / EN 12311-1 | 40 / 45 %  | -                                   |  |  |
| Flexibility at low temperatures    | EN 1109              | -40 °C   | -40 °F                              |  |  |

 $<sup>^{(\!1\!)}</sup>$  For the correlation between laboratory tests and actual conditions, see page 199.

| CODE | description | tape | Н   | L   | Α                 | Н    | L    | Α                  |    |
|------|-------------|------|-----|-----|-------------------|------|------|--------------------|----|
|      |             |      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| T95  | TRASPIR 95  | -    | 1,5 | 50  | 75                | 5    | 164  | 807                | 42 |

## I TRASPIR 110

HIGHLY BREATHABLE MEMBRANE



























## COMPOSITION

top layer non-woven PP fabric

middle layer PP breathable film

bottom layer non-woven PP fabric



### ■ TECHNICAL DATA

| Properties                          | standard             | value  | USC conversion                  |
|-------------------------------------|----------------------|--|---------------------------------|
| ·                                   |                      |  |                                 |
| Mass per unit area                  | EN 1849-2            | 112 g/m <sup>2</sup>                                 | 0.37 oz/ft <sup>2</sup>         |
| Thickness                           | EN 1849-2            | 0.4 mm   | 16 mil                          |
| Water vapour transmission (Sd)      | EN 1931              | 0,03 m   | -                               |
| Water vapour transmission (dry cup) | ASTM E96/ E96M       | 101 US perm  | -                               |
| water vapour transmission (dry cup) | A31111 E90/ E90111   | 5810 ng/(s·m <sup>2</sup> ·Pa)                       | -                               |
| Maximum tensile force MD/CD         | EN 12311-1           | 250 / 165 N/50mm                                     | 29 / 19 lb/in                   |
| Elongation MD/CD                    | EN 12311-1           | 50 / 70 %  | -                               |
| Resistance to nail tearing MD/CD    | EN 12310-1           | 115 / 135 N  | 26 / 30 lbf                     |
| Watertightness                      | EN 1928              | class W1   | -                               |
| Temperature resistance              | -                    | -40 / 80 °C  | -40 / 176 °F                    |
| Reaction to fire                    | EN 13501-1           | class E  | -                               |
| Resistance to penetration of air    | EN 12114             | $< 0.02 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.001 cfm/ft² at 50Pa         |
| Thermal conductivity (λ)            | -                    | 0,3 W/(m·K)  | 0.17 BTU/h·ft·°F                |
| Specific heat                       | -                    | 1800 J/(kg·K)  | -                               |
| Density                             | -                    | approx. 264 kg/m <sup>3</sup>                        | approx. 0.15 oz/in <sup>3</sup> |
| Water vapour resistance factor (μ)  | -                    | approx. 50   | approx. 0.15 MNs/g              |
| VOC content                         | -                    | 0 %  | -                               |
| UV stability <sup>(1)</sup>         | EN 13859-1/2         | 3 months   | -                               |
| Exposure to weather <sup>(1)</sup>  | -                    | 2 weeks  | -                               |
| Water column                        | ISO 811              | > 280 cm   | > 110 in                        |
| After ageing:                       |                      |  |                                 |
| - watertightness                    | EN 1297 / EN 1928    | class W1   | -                               |
| - maximum tensile force MD/CD       | EN 1297 / EN 12311-1 | 220 / 145 N/50mm                                     | 25 / 17 lb/in                   |
| - elongation                        | EN 1297 / EN 12311-1 | 40 / 60 %  | -                               |
| Flexibility at low temperatures     | EN 1109              | -30 °C   | -22 °F                          |
| Driving rain test                   | TU Berlin            | passed   | -                               |

<sup>(1)</sup> For the correlation between laboratory tests and actual conditions, see page 199.

### CODES AND DIMENSIONS

| CODE   | description       | tape | Н   | L   | Α       | Н    | L    | Α                  |    |
|--------|-------------------|------|-----|-----|---------|------|------|--------------------|----|
|        |                   |      | [m] | [m] | $[m^2]$ | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| T110   | TRASPIR 110       | _    | 1,5 | 50  | 75      | 5    | 164  | 807                | 36 |
| T11030 | TRASPIR 110 3,0 m | -    | 3   | 50  | 150     | 10   | 164  | 1615               | 36 |

## TRASPIR EVO UV 115

HIGHLY BREATHABLE MONOLITHIC

MEMBRANE RESISTANT TO UV RAYS















**SAFETY** 

High watertightness and excellent weather resistance thanks to the special extruded mix.

### B-s1.d0

Flame retardant certification, Euroclass reaction to fire B-s1, d0 based on EN 13501-1.

### PERMANENT UV STABILITY

Permanent resistance to UV rays with exposure with open joints up to 30 mm wide, and with up to 20% of the surface uncovered.

## COMPOSITION

top layer highly UV-stable PP non-woven fabric

bottom layer breathable monolithic PU film



### CODES AND DIMENSIONS

| CODE   | description        | tape | Н   | L   | Α                 | Н    | L    | Α                  |    |
|--------|--------------------|------|-----|-----|-------------------|------|------|--------------------|----|
|        |                    |      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| TUV115 | TRASPIR EVO UV 115 | -    | 1,5 | 50  | 75                | 5    | 164  | 807                | 36 |



## **UV STABILITY**

The special monolithic compound ensures high UV stability even with open-joint façades.

### NON-FLAMMABLE

Thanks to the special chemical composition that is flame retardant, it is suitable for applications on facades in direct contact with the ventilation chamber, or in cases in which the product is visible in internal environments.

| Properties   | standard             | value   | USC conversion                |
|--|----------------------|---|-------------------------------|
| Mass per unit area   | EN 1849-2            | 115 g/m <sup>2</sup>                            | 0.38 oz/ft <sup>2</sup>       |
| Thickness  | EN 1849-2            | 0,3 mm  | 12 mil                        |
| Water vapour transmission (Sd)   | EN 1931              | 0,08 m  | 43.706 US perm                |
| Maximum tensile force MD/CD  | EN 12311-1           | 150 / 110 N/50mm                                | 17 / 13 lb/in                 |
| Elongation MD/CD   | EN 12311-1           | 90 / 90 %                                       | -                             |
| Resistance to nail tearing MD/CD   | EN 12310-1           | 130 / 170 N                                     | 29 / 38 lbf                   |
| Watertightness   | EN 1928              | class W1  | -                             |
| Temperature resistance   | -                    | -40 / 80 °C                                     | -40 / 176 °F                  |
| Reaction to fire   | EN 13501-1           | class B-s1,d0                                   | -                             |
| Resistance to penetration of air   | EN 12114             | $0 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | 0 cfm/ft <sup>2</sup> at 50Pa |
| Thermal conductivity (λ)   | -                    | 0,3 W/(m·K)                                     | 0.17 BTU/h·ft·°F              |
| Specific heat  | -                    | 1800 J/(kg·K)                                   | _                             |
| Density  | -                    | approx. 300 kg/m <sup>3</sup>                   | approx. 0.17 oz/in³           |
| Water vapour resistance factor (μ)   | -                    | approx. 270                                     | approx. 0.4 MNs/g             |
| VOC content  | -                    | 0 %   | -                             |
| UV resistance without final coating <sup>(1)</sup>                                 | EN 13859-1/2         | 4 months  | -                             |
| Weathering without final cladding <sup>(1)</sup>                                   | -                    | 8 weeks   | -                             |
| UV stability with joints up to 30 mm wide exposing no more than 20% of the surface | EN 13859-2           | permanent                                       | -                             |
| Water column   | ISO 811              | > 500 cm  | > 197 in                      |
| After ageing:  |                      |   |                               |
| - watertightness at 100°C  | EN 1297 / EN 1928    | class W1  | -                             |
| - maximum tensile force MD/CD  | EN 1297 / EN 12311-1 | > 98 / 72 N/50mm                                | > 11 / 8 lb/in                |
| - elongation   | EN 1297 / EN 12311-1 | > 59 / 59 %                                     | -                             |
| Flexibility at low temperatures  | EN 1109              | -40 °C  | -40 °F                        |
| Driving rain test  | TU Berlin            | passed  | _                             |

<sup>(1)</sup> Membrane subjected to artificial ageing test for 5000h (standard 336h). For correlation between laboratory tests and actual conditions, see page 199.

### ■ FIRE PROTECTION



FIRE SEALING page 122 -124



FIRE FOAM page 118



FIRE STRIPE page 130



FRONT BAND UV 210 page 98



### INNOVATION

The membrane features an innovative technology that allows it to be used even on metal façades with high temperature fluctuations, without compromising its performance.

## I TRASPIR ALU 120

















## COMPOSITION

top layer aluminium film

bottom layer PP breathable film



## ■ TECHNICAL DATA

| Properties                                       | standard             | value  | value                               |
|--|----------------------|--|-------------------------------------|
| <u>'</u>   |                      |  |                                     |
| Mass per unit area                               | EN 1849-2            | 120 g/m <sup>2</sup>                                 | 0.39 oz/ft <sup>2</sup>             |
| Thickness  | EN 1849-2            | 0,6 mm   | 24 mil                              |
| Water vapour transmission (Sd)                   | EN 1931              | 0,1 m  | 34.965 US perm                      |
| Maximum tensile force MD/CD                      | EN 12311-1           | 239 / 204 N/50mm                                     | 27 / 23 lb/in                       |
| Elongation MD/CD                                 | EN 12311-1           | 94 / 126 %   | -                                   |
| Resistance to nail tearing MD/CD                 | EN 12310-1           | 187 / 232 N  | 42 / 52 lbf                         |
| Watertightness                                   | EN 1928              | class W2   | -                                   |
| Temperature resistance                           | -                    | -20 / 80 °C  | -4 / 176 °F                         |
| Reaction to fire                                 | EN 13501-1           | class E  | -                                   |
| Resistance to penetration of air                 | EN 12114             | $< 0.05 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.003 cfm/ft <sup>2</sup> at 50Pa |
| Thermal conductivity (λ)                         | -                    | 0,3 W/(m·K)  | 0.17 BTU/h·ft·°F                    |
| Specific heat                                    | -                    | 1800 J/(kg·K)  | -                                   |
| Density  | -                    | approx. 200 kg/m <sup>3</sup>                        | approx. 0.11 oz/in³                 |
| Water vapour resistance factor (µ)               | -                    | approx. 166  | approx. 0,5 MNs/g                   |
| VOC content                                      | -                    | 0 %  | -                                   |
| Reflectivity                                     | EN 15976             | 81 %   | -                                   |
| Equivalent thermal resistance with 50 mm air gap | 100 00 40            | $R_{q,0,025}$ : 0,804 (m <sup>2</sup> K)/W           | 4.57 h·ft <sup>2</sup> .°F/BTU      |
| $(\epsilon_{\text{other surface}} 0.025-0.88)$   | ISO 6946             | $R_{g,0,88}$ : 0,502 (m <sup>2</sup> K)/W            | 2.85 h·ft <sup>2</sup> ·°F/BTU      |
| UV stability <sup>(1)</sup>                      | EN 13859-1/2         | 3 months   | -                                   |
| Exposure to weather <sup>(1)</sup>               | -                    | 2 weeks  | -                                   |
| After ageing:                                    |                      |  |                                     |
| - watertightness                                 | EN 1297 / EN 1928    | class W2   | -                                   |
| - maximum tensile force MD/CD                    | EN 1297 / EN 12311-1 | 167 / 155 N/50mm                                     | 19 / 18 lb/in                       |
| - elongation                                     | EN 1297 / EN 12311-1 | 56 / 75 %  | -                                   |
| Flexibility at low temperatures                  | EN 1109              | -40 °C   | -40 °F                              |

<sup>(1)</sup> For the correlation between laboratory tests and actual conditions, see page 199.

## ■ CODES AND DIMENSIONS

| CODE      | description           | tape | Н   | L   | Α                 | Н    | L    | Α                  |    |
|-----------|-----------------------|------|-----|-----|-------------------|------|------|--------------------|----|
|           |                       |      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| TALU120   | TRASPIR ALU 120       | -    | 1,5 | 50  | 75                | 5    | 164  | 807                | 26 |
| TALU12030 | TRASPIR ALU 120 3,0 m | -    | 3   | 100 | 300               | 10   | 328  | 3230               | 12 |

## I TRASPIR 135

HIGHLY BREATHABLE MEMBRANE





















## COMPOSITION

top layer non-woven PP fabric

middle layer PP breathable film

bottom layer non-woven PP fabric



## ■ TECHNICAL DATA

| Properties                         | standard             | value  | USC conversion                      |
|------------------------------------|----------------------|--|-------------------------------------|
| Mass per unit area                 | EN 1849-2            | 135 g/m <sup>2</sup>                                 | 0.44 oz/ft <sup>2</sup>             |
| Thickness                          | EN 1849-2            | 0,6 mm   | 24 mil                              |
| Water vapour transmission (Sd)     | EN 1931              | 0,02 m   | 174.825 US perm                     |
| Maximum tensile force MD/CD        | EN 12311-1           | 280 / 190 N/50mm                                     | 32 / 22 lb/in                       |
| Elongation MD/CD                   | EN 12311-1           | 70 / 110 %   | -                                   |
| Resistance to nail tearing MD/CD   | EN 12310-1           | 135 / 170 N  | 30 / 38 lbf                         |
| Watertightness                     | EN 1928              | class W1   | -                                   |
| Temperature resistance             | ÷                    | -40 / 80 °C  | -40 / 176 °F                        |
| Reaction to fire                   | EN 13501-1           | class E  | -                                   |
| Surface combustion characteristic  | ASTM E84             | class 1 or class A                                   |                                     |
| Resistance to penetration of air   | EN 12114             | $< 0.05 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.003 cfm/ft <sup>2</sup> at 50Pa |
| Thermal conductivity (λ)           | -                    | 0,3 W/(m·K)  | 0.17 BTU/h·ft:°F                    |
| Specific heat                      | -                    | 1800 J/(kg·K)  | -                                   |
| Density                            | -                    | approx. 225 kg/m <sup>3</sup>                        | approx. 0.13 oz/in <sup>3</sup>     |
| Water vapour resistance factor (μ) | -                    | approx. 33   | approx. 0.1 MNs/g                   |
| VOC content                        | -                    | 0 %  | -                                   |
| UV stability <sup>(1)</sup>        | EN 13859-1/2         | 3 months   | -                                   |
| Exposure to weather <sup>(1)</sup> | -                    | 2 weeks  | -                                   |
| Water column                       | ISO 811              | > 250 cm   | > 98 in                             |
| After ageing:                      |                      |  |                                     |
| - watertightness                   | EN 1297 / EN 1928    | class W1   | -                                   |
| - maximum tensile force MD/CD      | EN 1297 / EN 12311-1 | 250 / 160 N/50mm                                     | 29 / 18 lb/in                       |
| - elongation                       | EN 1297 / EN 12311-1 | 50 / 50 %  | -                                   |
| Flexibility at low temperatures    | EN 1109              | -40 °C   | -40 °F                              |

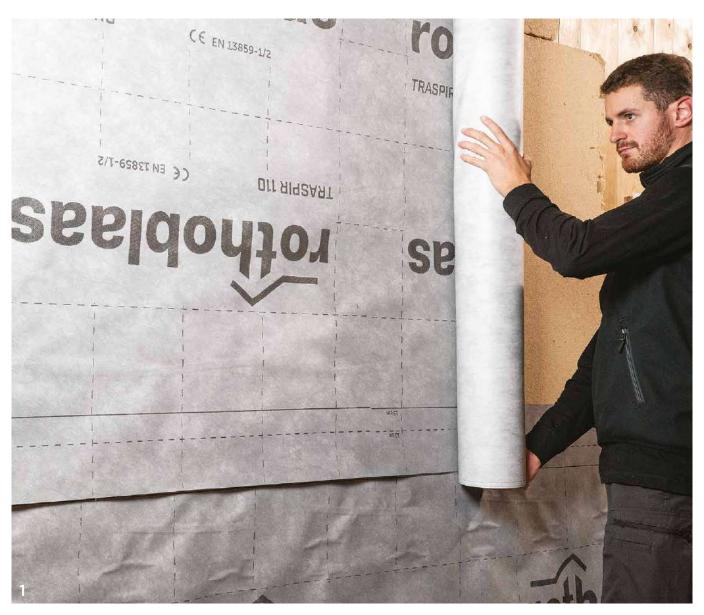
 $<sup>^{(1)}</sup>$  For the correlation between laboratory tests and actual conditions, see page 199.

## **■ CODES AND DIMENSIONS**

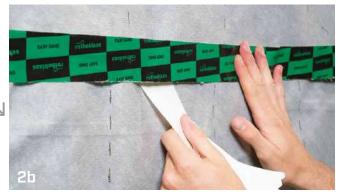
| CODE   | description    | tape | Н   | L   | Α                 | Н    | L    | А                  |    |
|--------|----------------|------|-----|-----|-------------------|------|------|--------------------|----|
|        |                |      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| T135   | TRASPIR 135    | -    | 1,5 | 50  | 75                | 5    | 164  | 807                | 28 |
| TTT135 | TRASPIR 135 TT | TT   | 1,5 | 50  | 75                | 5    | 164  | 807                | 28 |

## ■ RECOMMENDATIONS FOR INSTALLATION: TRASPIR

APPLICATION ON WALL - EXTERNAL SIDE







2b ALU BAND, EASY BAND, SPEEDY BAND, FLEXI BAND, FLEXI BAND UV, FACADE BAND, SOLID BAND, PLASTER BAND

TRASPIR 95, TRASPIR 110, TRASPIR ALU 120, TRASPIR 135, TRASPIR 150, TRASPIR EVO 160, TRASPIR ALU FIRE A2 430

DOUBLE BAND, SUPRA BAND, BUTYL BAND 2a OUTSIDE GLUE

## ■ RECOMMENDATIONS FOR INSTALLATION: TRASPIR

#### APPLICATION ON WINDOW - EXTERNAL SIDE



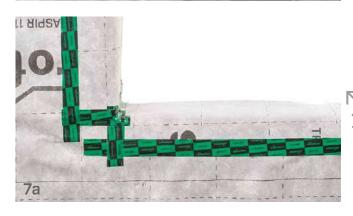














- 1 TRASPIR 95, TRASPIR 110, TRASPIR SUNTEX 120, TRASPIR 135, TRASPIR 150, TRASPIR EVO 160, TRASPIR ALU FIRE A2 430
- 2 MARLIN, CUTTER
- **5** HAMMER STAPLER 47, HAMMER STAPLER 22, HAND STAPLER, STAPLES
- EASY BAND, SPEEDY BAND, FLEXI BAND, FLEXI BAND UV, FACADE BAND, SOLID BAND, SMART BAND, PLASTER BAND

## I TRASPIR 150

HIGHLY BREATHABLE MEMBRANE



























## COMPOSITION

top layer

non-woven PP fabric

middle layer PP breathable film

bottom layer non-woven PP fabric



## ■ TECHNICAL DATA

| Properties                          | standard             | value  | USC conversion                      |
|-------------------------------------|----------------------|--|-------------------------------------|
| Mass per unit area                  | EN 1849-2            | 150 g/m <sup>2</sup>                                 | 0.49 oz/ft <sup>2</sup>             |
| Thickness                           | EN 1849-2            | 0,7 mm   | 28 mil                              |
| Water vapour transmission (Sd)      | EN 1931              | 0,02 m   | -                                   |
| Water vapour transmission (dry cup) | ASTM E96/ E96M       | 125 US perm  | -                                   |
| water vapour transmission (dry cup) | A311VI E90/ E90IVI   | 7115 ng/(s·m <sup>2</sup> ·Pa)                       | -                                   |
| Maximum tensile force MD/CD         | EN 12311-1           | 350 / 210 N/50mm                                     | 40 / 24 lb/in                       |
| Elongation MD/CD                    | EN 12311-1           | 100 / 125 %  | -                                   |
| Resistance to nail tearing MD/CD    | EN 12310-1           | 190 / 225 N  | 43 / 51 lbf                         |
| Watertightness                      | EN 1928              | class W1   | -                                   |
| Temperature resistance              |                      | -40 / 80 °C  | -40 / 176 °F                        |
| Reaction to fire                    | EN 13501-1           | class E  | -                                   |
| Resistance to penetration of air    | EN 12114             | $< 0.04 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.002 cfm/ft <sup>2</sup> at 50Pa |
| Thermal conductivity (λ)            | -                    | 0,3 W/(m·K)  | 0.17 BTU/h·ft·°F                    |
| Specific heat                       | -                    | 1800 J/(kg·K)  | -                                   |
| Density                             | -                    | approx. 215 kg/m <sup>3</sup>                        | approx. 0.12 oz/in <sup>3</sup>     |
| Water vapour resistance factor (μ)  | -                    | approx. 40   | approx. 0.1 MNs/g                   |
| VOC content                         | -                    | 0 %  | -                                   |
| UV stability <sup>(1)</sup>         | EN 13859-1/2         | 3 months   | -                                   |
| Exposure to weather <sup>(1)</sup>  | -                    | 2 weeks  | -                                   |
| Water column                        | ISO 811              | > 250 cm   | > 98 in                             |
| After ageing:                       |                      |  |                                     |
| - watertightness                    | EN 1297 / EN 1928    | class W1   | -                                   |
| - maximum tensile force MD/CD       | EN 1297 / EN 12311-1 | 310 / 180 N/50mm                                     | 35 / 21 lb/in                       |
| - elongation                        | EN 1297 / EN 12311-1 | 45 / 60 %  | -                                   |
| Flexibility at low temperatures     | EN 1109              | -40 °C   | -40 °F                              |

 $<sup>^{(1)}</sup>$  For the correlation between laboratory tests and actual conditions, see page 199.

### CODES AND DIMENSIONS

| CODE   | description       | tape | Н   | L   | Α                 | Н    | L    | Α                  |    |
|--------|-------------------|------|-----|-----|-------------------|------|------|--------------------|----|
|        |                   |      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| T150   | TRASPIR 150       | -    | 1,5 | 50  | 75                | 5    | 164  | 807                | 25 |
| TTT150 | TRASPIR 150 TT    | TT   | 1,5 | 50  | 75                | 5    | 164  | 807                | 25 |
| T15030 | TRASPIR 150 3,0 m | -    | 3   | 50  | 150               | 10   | 164  | 1615               | 25 |

## **I TRASPIR NET 160**

HIGHLY BREATHABLE MEMBRANE

























## COMPOSITION

top layer

non-woven PP fabric

reinforcing layer reinforcing PP grid

middle layer PP breathable film

bottom layer non-woven PP fabric



### ■ TECHNICAL DATA

| Properties                         | standard             | value   | USC conversion                      |
|------------------------------------|----------------------|---|-------------------------------------|
| Mass per unit area                 | EN 1849-2            | 160 g/m <sup>2</sup>                                  | 0.52 oz/ft <sup>2</sup>             |
| Thickness                          | EN 1849-2            | 0,7 mm  | 28 mil                              |
| Water vapour transmission (Sd)     | EN 1931              | 0,02 m  | 174.825 US perm                     |
| Maximum tensile force MD/CD        | EN 12311-1           | 420 / 420 N/50mm                                      | 48 / 48 lb/in                       |
| Elongation MD/CD                   | EN 12311-1           | 25 / 20 %   | -                                   |
| Resistance to nail tearing MD/CD   | EN 12310-1           | 390 / 360 N   | 88 / 81 lbf                         |
| Watertightness                     | EN 1928              | class W1  | -                                   |
| Temperature resistance             | -                    | -40 / 80 °C   | -40 / 176 °F                        |
| Reaction to fire                   | EN 13501-1           | class E   | -                                   |
| Resistance to penetration of air   | EN 12114             | $< 0.035 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.002 cfm/ft <sup>2</sup> at 50Pa |
| Thermal conductivity (λ)           | -                    | 0,04 W/(m·K)  | 0.02 BTU/h·ft·°F                    |
| Specific heat                      | -                    | 1568 J/(kg·K)   | -                                   |
| Density                            | -                    | approx. 230 kg/m <sup>3</sup>                         | approx. 0.13 oz/in <sup>3</sup>     |
| Water vapour resistance factor (µ) | -                    | approx 28   | approx. 0.1 MNs/g                   |
| VOC content                        | -                    | 0 %   | -                                   |
| UV stability <sup>(1)</sup>        | EN 13859-1/2         | 3 months  | -                                   |
| Exposure to weather <sup>(1)</sup> | -                    | 3 weeks   | -                                   |
| Water column                       | ISO 811              | > 500 cm  | > 197 in                            |
| After ageing:                      |                      |   |                                     |
| - watertightness                   | EN 1297 / EN 1928    | class W1  | -                                   |
| - maximum tensile force MD/CD      | EN 1297 / EN 12311-1 | 385 / 390 N/50mm                                      | 44 / 45 lb/in                       |
| - elongation                       | EN 1297 / EN 12311-1 | 20 / 15 %   | -                                   |
| Flexibility at low temperatures    | EN 1109              | -20 °C  | -4 °F                               |
| Driving rain test                  | TU Berlin            | passed  | -                                   |

 $<sup>^{(1)}</sup>$  For the correlation between laboratory tests and actual conditions, see page 199.

## ■ CODES AND DIMENSIONS

| CODE   | description        | tape | Н   | L   | Α                 | Н    | L    | Α                  |    |
|--------|--------------------|------|-----|-----|-------------------|------|------|--------------------|----|
|        |                    |      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| T160   | TRASPIR NET 160    | -    | 1,5 | 50  | 75                | 5    | 164  | 807                | 25 |
| TTT160 | TRASPIR NET 160 TT | TT   | 1,5 | 50  | 75                | 5    | 164  | 807                | 25 |

## I TRASPIR EVO 160

ity over time, thanks to the special polymers used.













USA





B-s1,d2





### MONOLITHIC The monolithic structure of the membrane guarantees excellent durabil-

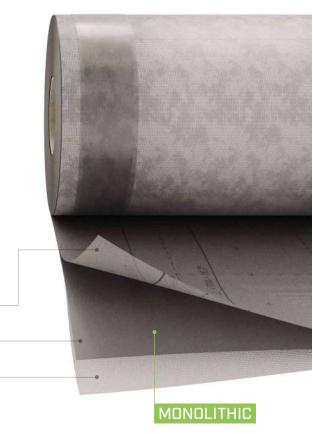
## REACTION TO FIRE B-s1,d2

Self-extinguishing membrane which does not spread the flame in case of fire, contributing to the protection of the structure.

### **HIGH UV STABILITY**

**MEMBRANE** 

It passed the artificial ageing test involving exposure to UV light for 1000 hours.



## COMPOSITION

top layer

non-woven PP fabric

middle layer

breathable monolithic TPE film

bottom layer

non-woven PP fabric

### CODES AND DIMENSIONS

| CODE      | description        | tape | Н   | L   | Α       | Н    | L    | Α                  |    |
|-----------|--------------------|------|-----|-----|---------|------|------|--------------------|----|
|           |                    |      | [m] | [m] | $[m^2]$ | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| TEVO160   | TRASPIR EVO 160    | -    | 1,5 | 50  | 75      | 5    | 164  | 807                | 30 |
| TTTEVO160 | TRASPIR EVO 160 TT | TT   | 1,5 | 50  | 75      | 5    | 164  | 807                | 30 |



## SECURE SEALING

The TT version offers fast installation and professional sealing thanks to the integrated double tape.

### **HEAVY RAIN**

High protection against heavy rain during temporary exposure to weather during construction.

| Properties                          | standard             | value  | USC conversion                      |
|-------------------------------------|----------------------|--|-------------------------------------|
| Mass per unit area                  | EN 1849-2            | 160 g/m <sup>2</sup>                                 | 0.52 oz/ft <sup>2</sup>             |
| Thickness                           | EN 1849-2            | 0,5 mm   | 20 mil                              |
| Water vapour transmission (Sd)      | EN 1931              | 0,1 m  | -                                   |
| Water vapour transmission (dry cup) | ASTM E96/ E96M       | 12.3 US perm<br>702 ng/(s·m²·Pa)                     | -                                   |
| Maximum tensile force MD/CD         | EN 12311-1           | 280 / 220 N/50mm                                     | 32 / 25 lb/in                       |
| Elongation MD/CD                    | EN 12311-1           | 50 / 60 %  | -                                   |
| Resistance to nail tearing MD/CD    | EN 12310-1           | 180 / 200 N  | 40 / 45 lbf                         |
| Watertightness                      | EN 1928              | class W1   | -                                   |
| Temperature resistance              | -                    | -40 / 100 °C   | -40 / 212 °F                        |
| Reaction to fire                    | EN 13501-1           | class B-s1,d2  | -                                   |
| Flammability index                  | AS 1530.2            | 1  | -                                   |
| Resistance to penetration of air    | EN 12114             | $< 0.02 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.001 cfm/ft <sup>2</sup> at 50Pa |
| Thermal conductivity (λ)            | -                    | 0,4 W/(m·K)  | 0.23 BTU/h·ft·°F                    |
| Specific heat                       | -                    | 1800 J/(kg·K)  | -                                   |
| Density                             | -                    | approx. 370 kg/m <sup>3</sup>                        | approx. 0.21 oz/in <sup>3</sup>     |
| Water vapour resistance factor (μ)  | -                    | approx. 160  | approx. 0,5 MNs/g                   |
| Joint strength                      | EN 12317-2           | > 200 N/50mm   | > 22.840589 lb/in                   |
| VOC content                         | -                    | 0 %  | _                                   |
| UV stability <sup>(1)</sup>         | EN 13859-1/2         | 6 months   | -                                   |
| Exposure to weather <sup>(1)</sup>  | -                    | 6 weeks  | -                                   |
| Water column                        | ISO 811              | > 500 cm   | > 197 in                            |
| After ageing:                       |                      |  |                                     |
| - watertightness                    | EN 1297 / EN 1928    | class W1   |                                     |
| - maximum tensile force MD/CD       | EN 1297 / EN 12311-1 | 260 / 200 N/50mm                                     | 30 / 23 lb/in                       |
| - elongation                        | EN 1297 / EN 12311-1 | 40 / 50 %  | -                                   |
| Flexibility at low temperatures     | EN 1109              | -40 °C   | -40 °F                              |
| Driving rain test                   | TU Berlin            | passed   | -                                   |

<sup>(1)</sup> For the correlation between laboratory tests and actual conditions, see page 199.

### ■ FIRE PROTECTION



FIRE SEALING page 122 -124



FIRE FOAM page 118



FIRE STRIPE page 130



FRONT BAND UV 210 page 98



## MONOLITHIC FILM

The monolithic functional membrane guarantees breathability, thanks to a chemical reaction, rather than a micro perforation process as seen in microporous products. Therefore the continuous and homogeneous layer offers a complete barrier against the passage of water.

## I TRASPIR 200



## HIGHLY BREATHABLE MEMBRANE

















## COMPOSITION

top layer non-woven PP fabric

middle layer PP breathable film

bottom layer non-woven PP fabric



## ■ TECHNICAL DATA

| Properties                         | standard             | value  | USC conversion                      |
|------------------------------------|----------------------|--|-------------------------------------|
| Mass per unit area                 | EN 1849-2            | 200 g/m <sup>2</sup>                                 | 0.66 oz/ft <sup>2</sup>             |
| Thickness                          | EN 1849-2            | 0,8 mm   | 31 mil                              |
| Water vapour transmission (Sd)     | EN 1931              | 0,02 m   | 174.825 US perm                     |
| Maximum tensile force MD/CD        | EN 12311-1           | 360 / 270 N/50mm                                     | 41 / 31 lb/in                       |
| Elongation MD/CD                   | EN 12311-1           | 45 / 85 %  | -                                   |
| Resistance to nail tearing MD/CD   | EN 12310-1           | 230 / 270 N  | 52 / 61 lbf                         |
| Watertightness                     | EN 1928              | class W1   | -                                   |
| Temperature resistance             | -                    | -40 / 80 °C  | -40 / 176 °F                        |
| Reaction to fire                   | EN 13501-1           | class E  | -                                   |
| Resistance to penetration of air   | EN 12114             | $< 0.02 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.001 cfm/ft <sup>2</sup> at 50Pa |
| Thermal conductivity (λ)           | -                    | 0,04 W/(m·K)   | 0.02 BTU/h·ft·°F                    |
| Specific heat                      | -                    | 1568 J/(kg·K)  | -                                   |
| Density                            | -                    | approx. 250 kg/m <sup>3</sup>                        | approx. 0.14 oz/in <sup>3</sup>     |
| Water vapour resistance factor (μ) | -                    | approx. 25   | approx. 0.1 MNs/g                   |
| VOC content                        | -                    | 0 %  | -                                   |
| UV stability <sup>(1)</sup>        | EN 13859-1/2         | 3 months   | -                                   |
| Exposure to weather <sup>(1)</sup> | -                    | 4 weeks  | -                                   |
| Water column                       | ISO 811              | > 280 cm   | > 110.236224 in                     |
| After ageing:                      |                      |  |                                     |
| - watertightness                   | EN 1297 / EN 1928    | class W1   | -                                   |
| - maximum tensile force MD/CD      | EN 1297 / EN 12311-1 | 330 / 250 N/50mm                                     | 38 / 29 lb/in                       |
| - elongation                       | EN 1297 / EN 12311-1 | 35 / 70 %  | -                                   |
| Flexibility at low temperatures    | EN 1109              | -20 °C   | -4 °F                               |
| Driving rain test                  | TU Berlin            | passed   | -                                   |

 $<sup>^{(1)}</sup>$  For the correlation between laboratory tests and actual conditions, see page 199.

## ■ CODES AND DIMENSIONS

| CODE   | description    | tape | Н   | L   | Α                 | Н    | L    | Α                  |    |
|--------|----------------|------|-----|-----|-------------------|------|------|--------------------|----|
|        |                |      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| T200   | TRASPIR 200    | -    | 1,5 | 50  | 75                | 5    | 164  | 807                | 25 |
| TTT200 | TRASPIR 200 TT | TT   | 1,5 | 50  | 75                | 5    | 164  | 807                | 25 |

## I TRASPIR ALU 200



# REFLECTIVE HIGHLY BREATHABLE MEMBRANE

















## COMPOSITION





### **TECHNICAL DATA**

| Properties  | standard             | value  | USC conversion                  |
|---|----------------------|--|---------------------------------|
| Mass per unit area  | EN 1849-2            | 200 g/m <sup>2</sup>                                 | 0.66 oz/ft <sup>2</sup>         |
| Thickness   | EN 1849-2            | 0,8 mm   | 31 mil                          |
| Water vapour transmission (Sd)  | EN 1931              | 0,045 m  | 77.7 US perm                    |
| Maximum tensile force MD/CD   | EN 12311-1           | 350 / 225 N/50mm                                     | 40 / 26 lb/in                   |
| Elongation MD/CD  | EN 12311-1           | 30 / 70 %  | -                               |
| Resistance to nail tearing MD/CD  | EN 12310-1           | 200 / 200 N  | 45 / 45 lbf                     |
| Watertightness  | EN 1928              | class W1   | -                               |
| Temperature resistance  | -                    | -40 / 80 °C  | -40 / 176 °F                    |
| Reaction to fire  | EN 13501-1           | class E  | -                               |
| Resistance to penetration of air  | EN 12114             | $< 0.02 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.001 cfm/ft² at 50Pa         |
| Thermal conductivity (λ)  | -                    | 0,3 W/(m·K)  | 0.17 BTU/h·ft·°F                |
| Specific heat   | -                    | 1800 J/(kg·K)  | -                               |
| Density   | -                    | approx. 300 kg/m <sup>3</sup>                        | approx. 0.17 oz/in <sup>3</sup> |
| Water vapour resistance factor (μ)                                      | -                    | approx. 60   | approx. 0.22 MNs/g              |
| VOC content   | -                    | 0 %  | -                               |
| Reflectivity  | EN 15976             | 95 %   | -                               |
| Equivalent thermal resistance with 50mm air gap ( $\varepsilon_{other}$ | 150 5045             | $R_{g,0,025}$ : 0,821 (m <sup>2</sup> K)/W           | 4.66 h·ft².°F/BTU               |
| surface 0,025-0,88)   | ISO 6946             | $R_{g,0,88}$ : 0,731 (m <sup>2</sup> K)/W            | 4.15 h·ft <sup>2</sup> .°F/BTU  |
| UV stability <sup>(1)</sup>   | EN 13859-1/2         | 3 months   | -                               |
| Exposure to weather <sup>(1)</sup>                                      | -                    | 4 weeks  | -                               |
| Water column  | ISO 811              | > 300 cm   | > 118 in                        |
| After ageing:   |                      |  |                                 |
| - watertightness  | EN 1297 / EN 1928    | class W1   | -                               |
| - maximum tensile force MD/CD   | EN 1297 / EN 12311-1 | 330 / 175 N/50mm                                     | 38 / 20 lb/in                   |
| - elongation  | EN 1297 / EN 12311-1 | 25 / 50 %  | -                               |
| Flexibility at low temperatures   | EN 1109              | -30 °C   | -22 °F                          |
| Driving rain test   | TU Berlin            | passed   | -                               |

<sup>(1)</sup> For the correlation between laboratory tests and actual conditions, see page 199.

## ■ CODES AND DIMENSIONS

| CODE      | description        | tape | Н   | L   | Α                 | Н    | L    | А                  |    |
|-----------|--------------------|------|-----|-----|-------------------|------|------|--------------------|----|
|           |                    |      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| TTTALU200 | TRASPIR ALU 200 TT | TT   | 1,5 | 50  | 75                | 5    | 164  | 807                | 25 |

## I TRASPIR EVO SEAL 200

HIGHLY BREATHABLE MONOLITHIC

MEMBRANE, PERFORATION-PROOF

























#### **CERTIFIED**

It has passed stringent tests to be classified as a screw, staple or nail puncture resistant membrane.

#### TIME AND COST SAVING

The oversized TPU film ensures that the membrane remains waterproof even in the event of a screw or nail puncture without the need for additional products. This means that installation is quick and time-saving.

### AGEING RESISTANCE

The special functional film guarantees high durability and unaltered mechanical performance, ensuring protection and reliability.

## COMPOSITION

top layer

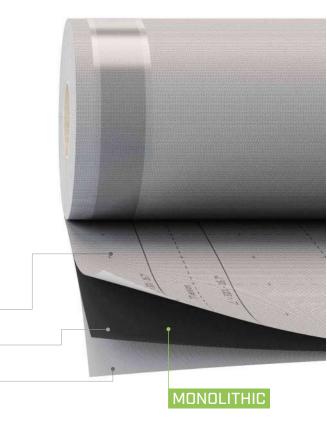
non-woven PP fabric

middle layer

breathable monolithic PU film

bottom layer

non-woven PP fabric



## CODES AND DIMENSIONS

| CODE      | description             | tape | Н   | L   | Α       | Н    | L    | Α                  |    |
|-----------|-------------------------|------|-----|-----|---------|------|------|--------------------|----|
|           |                         |      | [m] | [m] | $[m^2]$ | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| TEVO200   | TRASPIR EVO SEAL 200    | -    | 1,5 | 50  | 75      | 5    | 164  | 807                | 25 |
| TTTEVO200 | TRASPIR EVO SEAL 200 TT | TT   | 1,5 | 50  | 75      | 5    | 164  | 807                | 25 |



## MONOLITHIC FILM TPU

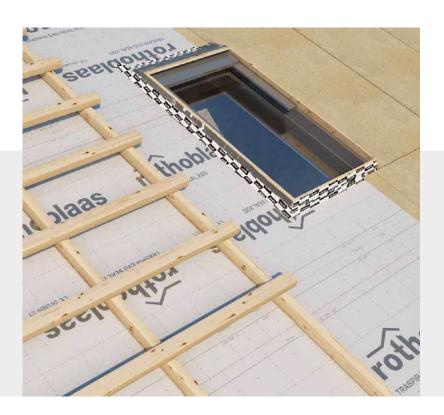
The modified TPU film oversized in thickness compared to market standards resists drilling screws and nails and provides the superior performance of a monolithic product.

### **SECURE**

Tested to fulfil the function of a temporary roof for up to 12 weeks with full exposure to weather.

| Properties                         | standard             | value                                    | USC conversion                  |
|------------------------------------|----------------------|--|---------------------------------|
| Mass per unit area                 | EN 1849-2            | 200 g/m <sup>2</sup>                     | 0.66 oz/ft <sup>2</sup>         |
| Thickness                          | EN 1849-2            | 0,7 mm                                   | 28 mil                          |
| Water vapour transmission (Sd)     | EN 1931              | 0,08 m                                   | 4.371 US perm                   |
| Maximum tensile force MD/CD        | EN 12311-1           | 300 / 220 N/50mm                         | 34 / 25 lb/in                   |
| Elongation MD/CD                   | EN 12311-1           | 50 / 70 %                                | -                               |
| Resistance to nail tearing MD/CD   | EN 12310-1           | 260 / 340 N                              | 58 / 76 lbf                     |
| Watertightness                     | EN 1928              | class W1                                 | -                               |
| Temperature resistance             | -                    | -40 / 80 °C                              | -40 / 176 °F                    |
| Reaction to fire                   | EN 13501-1           | class E                                  | -                               |
| Resistance to penetration of air   | EN 12114             | 0 m <sup>3</sup> /(m <sup>2</sup> h50Pa) | 0 cfm/ft <sup>2</sup> at 50Pa   |
| Thermal conductivity (λ)           | -                    | 0,04 W/(m·K)                             | 0.17 BTU/h·ft·°F                |
| Specific heat                      | -                    | 1800 J/(kg·K)                            | -                               |
| Density                            | -                    | approx. 285 kg/m <sup>3</sup>            | approx. 0.16 oz/in <sup>3</sup> |
| Water vapour resistance factor (µ) | -                    | approx. 114                              | 0.4 MNs/g                       |
| VOC content                        | -                    | 0 %                                      | -                               |
| UV stability <sup>(1)</sup>        | EN 13859-1/2         | 6 months                                 | -                               |
| Exposure to weather <sup>(1)</sup> | -                    | 12 weeks                                 | -                               |
| Water column                       | ISO 811              | 600 cm                                   | 236 in                          |
| After ageing:                      |                      |  |                                 |
| - watertightness at 100°C          | EN 1297 / EN 1928    | class W1                                 | -                               |
| - maximum tensile force MD/CD      | EN 1297 / EN 12311-1 | 270 / 200 N/50mm                         | 31 / 23 lb/in                   |
| - elongation                       | EN 1297 / EN 12311-1 | 25 / 35 %                                | -                               |
| Flexibility at low temperatures    | EN 1109              | -40 °C                                   | -40 °F                          |
| Driving rain test                  | TU Berlin            | passed                                   | -                               |
| Nail puncture test                 | ÖNORM B3647          | passed                                   | -                               |

<sup>(1)</sup> For the correlation between laboratory tests and actual conditions, see page 199.



## **ABRASION RESISTANT** AND DURABLE

The special compound guarantees high weather resistance and excellent durability in all weather conditions, also thanks to the special protective layer.

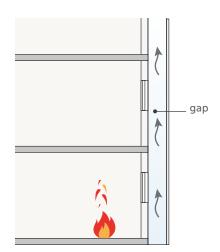
## I VENTILATED FAÇADES AND FIRE

Fire safety issues affect all building types, as described in the introduction "Structures and fire behaviour" (p. 12). In order to minimise this type of risk, it is essential to rely on the right components and to carefully design them. Our ventilated façade solutions minimise risks by limiting the spread of flames in the event of an internal or external fire.

### FIRE SPREAD PHASES IN A VENTILATED FAÇADE

1.

In the event of a fire starting inside the building, the flames initially spread to the room where they started. Modern buildings with ventilated façades are designed to take full advantage of the chimney effect of the ventilated façade, to reap the benefits of the upward movement of air in the gap between the cladding and the insulating layer. It is precisely this phenomenon that can give rise to problems in the event of a fire.

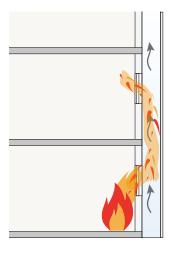


#### **CHIMNEY EFFECT**

The chimney effect is a physical phenomenon, at the basis of how traditional chimneys work, taken up by the world of architecture to ensure that, by exploiting the upward movement of hot air generated inside ventilated façades, a continuous cycle is created and the housing comfort of the building is increased.

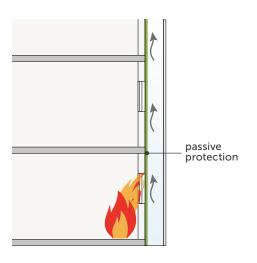
2.

In the event of a fire, the chimney effect of the ventilated façade could cause problems as it could direct the flames into the ventilation space, pushing them towards the upper floors of the building.



3.

Careful fire protection design includes active or passive protection devices within the design with the purpose to prevent the spread of any flames. Rothoblaas proposes the use of self-extinguishing membranes and tapes as a passive façade solution. If no preventive measures are taken, the combustion of materials could lead to flames on the upper floors. The same concepts also apply in the case of a fire developed outside the building.



## I TRASPIR FELT EVO UV 210



# BREATHABLE MONOLITHIC MEMBRANE RESISTANT TO UV RAYS





















## COMPOSITION

top layer breathable monolithic PU film

reinforcing layer PL fabric



### ■ TECHNICAL DATA

| Properties  | standard             | value  | USC conversion                      |
|---|----------------------|--|-------------------------------------|
| Mass per unit area  | EN 1849-2            | 210 g/m <sup>2</sup>                                 | 0.69 oz/ft <sup>2</sup>             |
| Thickness   | EN 1849-2            | 1 mm   | 39 mil                              |
| Water vapour transmission (Sd)  | EN 1931              | 0,1 m  | 34.965 US perm                      |
| Maximum tensile force MD/CD   | EN 12311-1           | 380 / 420 N/50mm                                     | 43 / 48 lb/in                       |
| Elongation MD/CD  | EN 12311-1           | 40 / 55 %  | -                                   |
| Resistance to nail tearing MD/CD  | EN 12310-1           | 220 / 210 N  | 49 / 47 lbf                         |
| Watertightness  | EN 1928              | class W1   | -                                   |
| Temperature resistance  | -                    | -40 / 100 °C   | -40 / 212 °F                        |
| Reaction to fire  | EN 13501-1           | class B-s1,d2  | -                                   |
| Resistance to penetration of air  | EN 12114             | $< 0.02 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.001 cfm/ft <sup>2</sup> at 50Pa |
| Thermal conductivity (λ)  | -                    | 0,2 W/(m·K)  | 0.12 BTU/h·ft·°F                    |
| Specific heat   | -                    | 1300 J/(kg·K)  | -                                   |
| Density   | -                    | approx. 210 kg/m <sup>3</sup>                        | approx. 0.12 oz/in <sup>3</sup>     |
| Water vapour resistance factor (µ)  | -                    | approx. 150  | approx. 0,5 MNs/g                   |
| VOC content   | -                    | 0 %  | -                                   |
| UV resistance without final coating <sup>(1)</sup>  | EN 13859-1/2         | 4 months   | -                                   |
| UV stability with joints up to 30 mm wide exposing no more than 30% of the surface <sup>(2)</sup> | EN 13859-1/2         | permanent  | -                                   |
| Weathering without final cladding (1)   | -                    | 10 weeks   | -                                   |
| Water column  | ISO 811              | > 300 cm   | > 118.11024 in                      |
| After ageing:   |                      |  |                                     |
| - watertightness  | EN 1297 / EN 1928    | class W1   | -                                   |
| - maximum tensile force MD/CD   | EN 1297 / EN 12311-1 | 340 / 380 N/50mm                                     | 39 / 43 lb/in                       |
| - elongation  | EN 1297 / EN 12311-1 | 35 / 50 %  | -                                   |
| Flexibility at low temperatures   | EN 1109              | -30 °C   | -22 °F                              |
| Driving rain test   | TU Berlin            | passed   | -                                   |

<sup>(1)</sup> Membrane subjected to artificial ageing test for 5000h (standard 336h). For correlation between laboratory tests and actual conditions, see page 199.

### CODES AND DIMENSIONS

| CODE     | description               | tape | Н   | L   | Α                 | Н    | L    | Α                  |    |
|----------|---------------------------|------|-----|-----|-------------------|------|------|--------------------|----|
|          |                           |      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| TUV210   | TRASPIR FELT UV 210       | -    | 1,5 | 50  | 75                | 5    | 164  | 807                | 16 |
| TUV21030 | TRASPIR FELT UV 210 3,0 m | -    | 3   | 50  | 150               | 10   | 164  | 1615               | 16 |

<sup>(2)</sup>The membrane is not suitable for standing water for long periods.

## I TRASPIR EVO UV 210

HIGHLY BREATHABLE MONOLITHIC

MEMBRANE RESISTANT TO UV RAYS





















#### MONOLITHIC

The monolithic structure of the membrane guarantees excellent durability over time, thanks to the special polymers used.

#### B-s1.d0

Flame retardant certification, Euroclass reaction to fire B-s1,d0 based on EN 13501-1.

### PERMANENT UV STABILITY

Permanent resistance to UV rays with exposure with open joints up to 50 mm wide, and with up to 40% of the surface uncovered.



top layer monolithic breathable film

reinforcing layer PL fabric



### CODES AND DIMENSIONS

| CODE     | description           | tape | Н   | L   | Α                 | Н    | L    | Α                  | 656 |
|----------|-----------------------|------|-----|-----|-------------------|------|------|--------------------|-----|
|          |                       |      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |     |
| TTTUV210 | TRASPIR EVO UV 210 TT | TT   | 1,5 | 50  | 75                | 5    | 164  | 807                | 24  |



### OPEN JOINTS FAÇADE

Discontinuous coating of ventilated façades can be created, with grouting up to 5 cm wide.

### **EASY INSTALLATION**

The polyethylene reinforcing layer gives a solid structure to the membrane, avoiding swelling during installation, and making the placing easier.

| Properties  | standard             | value  | USC conversion                      |
|---|----------------------|--|-------------------------------------|
| Mass per unit area  | EN 1849-2            | 210 g/m <sup>2</sup>                                 | 0.69 oz/ft <sup>2</sup>             |
| Thickness   | EN 1849-2            | 0,3 mm   | 12 mil                              |
| Water vapour transmission (Sd)  | EN 1931              | 0,04 m   | -                                   |
| Water vapour transmission (dry cup)   | ASTM E96/ E96M       | 41.7 US perm<br>2380 ng/(s·m²·Pa)                    | -                                   |
| Maximum tensile force MD/CD   | EN 12311-1           | 300 / 200 N/50mm                                     | 34 / 23 lb/in                       |
| Elongation MD/CD  | EN 12311-1           | 25 / 25 %  | -                                   |
| Resistance to nail tearing MD/CD  | EN 12310-1           | 120 / 120 N  | 27 / 27 lbf                         |
| Watertightness  | EN 1928              | class W1   | -                                   |
| Temperature resistance  | -                    | -40 / 120 °C   | -4 / 248 °F                         |
| Reaction to fire  | EN 13501-1           | class B-s1,d0  | -                                   |
| Surface combustion characteristic   | ASTM E84             | class 1 or class A                                   | -                                   |
| Resistance to penetration of air  | EN 12114             | $< 0.03 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.002 cfm/ft <sup>2</sup> at 50Pa |
| Thermal conductivity (λ)  | -                    | 0,3 W/(m·K)  | 0.17 BTU/h·ft·°F                    |
| Specific heat   | -                    | 1800 J/(kg·K)  | -                                   |
| Density   | -                    | approx. 600 kg/m <sup>3</sup>                        | approx. 0.35 oz/in <sup>3</sup>     |
| Water vapour resistance factor (µ)  | -                    | approx. 130  | approx. 0.2 MNs/g                   |
| VOC content   | -                    | 0 %  | -                                   |
| UV resistance without final coating <sup>(1)</sup>  | EN 13859-1/2         | 6 months   | -                                   |
| UV stability with joints up to 50 mm wide exposing no more than 40% of the surface <sup>(2)</sup> | EN 13859-1/2         | permanent  | -                                   |
| Weathering without final cladding (1)   | -                    | 12 weeks   | -                                   |
| After ageing:   |                      |  |                                     |
| - watertightness  | EN 1297 / EN 1928    | class W1   | -                                   |
| - maximum tensile force MD/CD   | EN 1297 / EN 12311-1 | 290 / 190 N/50mm                                     | 33 / 22 lb/in                       |
| - elongation  | EN 1297 / EN 12311-1 | 20 / 20 %  | -                                   |
| Flexibility at low temperatures   | EN 1109              | -40 °C   | -40 °F                              |

<sup>(1)</sup> Membrane subjected to artificial ageing test for 5000h (standard 336h). For correlation between laboratory tests and actual conditions, see page 199.

### ■ FIRE PROTECTION



FIRE SEALING page 122 -124



FIRE FOAM page 118



FIRE STRIPE page 130



FRONT BAND UV 210 page 98



## **EXCELLENT AESTHETIC PERFORMANCE**

Thanks to the mass per unit area and the polyacrylate mix, the product gurantees high thermal and dimensional stability, features that prevent swelling during installation. Finish appearance is guaranteed by the use of FRONT BAND UV 210, made with the same support, to blend in with the membrane.

<sup>&</sup>lt;sup>(2)</sup>The membrane is not suitable for standing water for long periods.

## RECOMMENDATIONS FOR INSTALLATION: TRASPIR UV

APPLICATION ON WALL - MEMBRANE WITH DOUBLE TAPE







APPLICATION ON WALL - MEMBRANE WITHOUT DOUBLE TAPE







## **■ RECOMMENDATIONS FOR INSTALLATION: TRASPIR UV**

APPLICATION ON WINDOW - EXTERNAL SIDE

















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

## TRASPIR EVO 220

























### MONOLITHIC

The monolithic structure of the membrane guarantees excellent durability over time, thanks to the special polymers used.

#### **SUPER TAPE**

Greater tape width to guarantee excellent resistance to heavy rain, approved by ÖNORM B 4119.

#### **ANTISLIP**

Rough surface for excellent sliding resistance thanks to the double polypropylene coating.



top layer

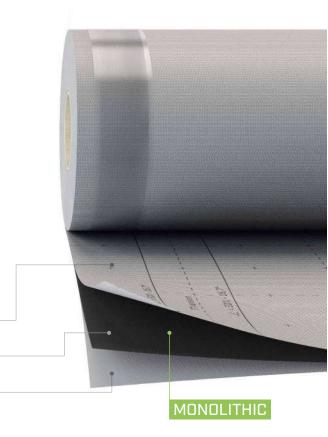
non-woven PP fabric

middle layer

breathable monolithic TPE film

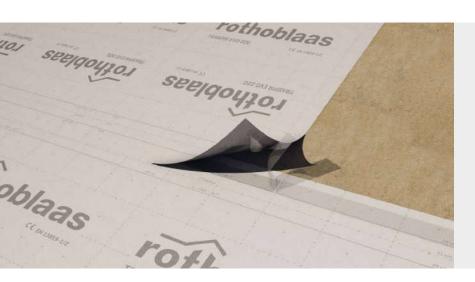
bottom layer

non-woven PP fabric



### CODES AND DIMENSIONS

| CODE      | description        | tape | Н   | L   | Α                 | Н    | L    | Α                  |    |
|-----------|--------------------|------|-----|-----|-------------------|------|------|--------------------|----|
|           |                    |      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| TEVO220   | TRASPIR EVO 220    | -    | 1,5 | 50  | 75                | 5    | 164  | 807                | 20 |
| TTTEVO220 | TRASPIR EVO 220 TT | TT   | 1,5 | 50  | 75                | 5    | 164  | 807                | 20 |



### **RELIABILITY**

The wider width integrated double tape offers the highest possible protection against heavy rain.

### SAFETY

During construction, the monolithic film of the membrane guarantees excellent durability, even when exposed to UV rays

| Properties                         | standard             | value   | USC conversion                  |
|------------------------------------|----------------------|---|---------------------------------|
| Mass per unit area                 | EN 1849-2            | 220 g/m <sup>2</sup>                            | 0.72 oz/ft <sup>2</sup>         |
| Thickness                          | EN 1849-2            | 1 mm  | 39 mil                          |
| Water vapour transmission (Sd)     | EN 1931              | 0,2 m   | 17.483 US perm                  |
| Maximum tensile force MD/CD        | EN 12311-1           | 385 / 315 N/50mm                                | 44 / 36 lb/in                   |
| Elongation MD/CD                   | EN 12311-1           | 65 / 80 %                                       | -                               |
| Resistance to nail tearing MD/CD   | EN 12310-1           | 345 / 425 N                                     | 78 / 96 lbf                     |
| Watertightness                     | EN 1928              | class W1  | -                               |
| Temperature resistance             | -                    | -40 / 80 °C                                     | -40 / 176 °F                    |
| Reaction to fire                   | EN 13501-1           | class E   | -                               |
| Resistance to penetration of air   | EN 12114             | $0 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | 0 cfm/ft <sup>2</sup> at 50Pa   |
| Thermal conductivity (λ)           | -                    | 0,3 W/(m·K)                                     | 0.17 BTU/h·ft·°F                |
| Specific heat                      | -                    | 1800 J/(kg·K)                                   | -                               |
| Density                            | -                    | approx. 220 kg/m <sup>3</sup>                   | approx. 0.13 oz/in <sup>3</sup> |
| Water vapour resistance factor (µ) | -                    | approx. 80                                      | approx. 1 MNs/g                 |
| Joint strength                     | EN 12317-2           | > 250 N/50mm                                    | > 28.5 lb/in                    |
| VOC content                        | -                    | 0 %   | -                               |
| UV stability <sup>(1)</sup>        | EN 13859-1/2         | 4 months  | -                               |
| Exposure to weather <sup>(1)</sup> | -                    | 8 weeks   | -                               |
| Water column                       | ISO 811              | > 500 cm  | > 197 in                        |
| After ageing:                      |                      |   |                                 |
| - watertightness at 100°C          | EN 1297 / EN 1928    | class W1  | -                               |
| - maximum tensile force MD/CD      | EN 1297 / EN 12311-1 | 365 / 270 N/50mm                                | 42 / 31 lb/in                   |
| - elongation                       | EN 1297 / EN 12311-1 | 47 / 51 %                                       | -                               |
| Flexibility at low temperatures    | EN 1109              | -40 °C  | -40 °F                          |
| Driving rain test                  | TU Berlin            | passed  | -                               |

<sup>(1)</sup> For the correlation between laboratory tests and actual conditions, see page 199.



## HIGH MASS PER UNIT AREA

The performance and mass per unit area of this monolithic membrane allow it to meet even the most severe national standards - classified as one of the highest performing membranes.

## I TRASPIR ADHESIVE 260

## HIGHLY BREATHABLE SELF-ADHESIVE **MEMBRANE**

















#### **SELF-ADHESIVE**

Thanks to the new generation glue, the membrane ensures good adhesion even on rough OSB.

#### **SECURE SEALING**

The adhesive surface prevents the formation of airflow behind the membrane in case of accidental breakage or failure to seal.

#### **BREATHABLE**

Thanks to the patented glue, the membrane remains perfectly breathable even when fully bonded.

### COMPOSITION

top layer

non-woven PP fabric

middle layer

PP breathable film

bottom layer

non-woven PP fabric

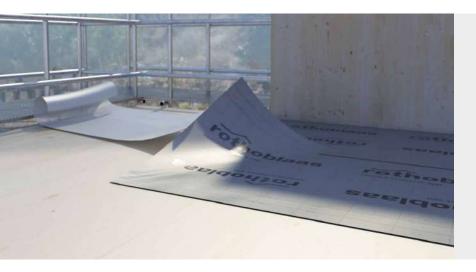
acrylate dispersion without solvents

release liner

removable plastic film

### CODES AND DIMENSIONS

| CODE   | description                 | liner     | Н    | L   | Α                 | Н    | L    | Α                  |    |
|--------|-----------------------------|-----------|------|-----|-------------------|------|------|--------------------|----|
|        |                             | [mm]      | [m]  | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| TA260  | TRASPIR ADHESIVE 260        | 725 / 725 | 1,45 | 50  | 72,5              | 5    | 164  | 780                | 16 |
| TAS260 | TRASPIR ADHESIVE 260 STRIPE | 180 / 180 | 0,36 | 50  | 18                | 1.18 | 164  | 194                | -  |



### **FAST INSTALLATION**

The fully self-adhesive surface of the membrane allows fast and safe installation without compromising performance.

### CONSTRUCTION SITE

During construction, it is essential to protect the structure, especially if it remains visible once the building is completed: TRASPIR ADHESIVE 260 offers excellent protection.

| Properties                            | standard             | value                                    | USC conversion                |
|---------------------------------------|----------------------|--|-------------------------------|
| Mass per unit area                    | EN 1849-2            | 260 g/m <sup>2</sup>                     | 0.85 oz/ft <sup>2</sup>       |
| Thickness                             | EN 1849-2            | approx. 0,6 mm                           | approx. 24 mil                |
| Water vapour transmission (Sd)        | EN 1931              | 0,22 m                                   | -                             |
| Water vapour transmission (dry cup)   | ASTM E96/ E96M       | -  | 16.5 US perm                  |
| Maximum tensile force MD/CD           | EN 12311-1           | 315 / 250 N/50mm                         | 36 / 29 lb/in                 |
| Elongation MD/CD                      | EN 12311-1           | 61 / 66 %                                | -                             |
| Resistance to nail tearing MD/CD      | EN 12310-1           | 255 / 260 N                              | 57 / 58 lbf                   |
| Watertightness                        | EN 1928              | class W1                                 | -                             |
| Temperature resistance                | -                    | -30 / 80 °C                              | -22 / 176 °F                  |
| Resistance to penetration of air      | EN 12114             | 0 m <sup>3</sup> /(m <sup>2</sup> h50Pa) | 0 cfm/ft <sup>2</sup> at 50Pa |
| Thermal conductivity (λ)              | -                    | 0,3 W/(m·K)                              | 0.17 BTU/h·ft·°F              |
| Specific heat                         | -                    | 1800 J/(kg·K)                            | -                             |
| Density                               | -                    | 433 kg/m <sup>3</sup>                    | approx. 0.25 oz/in³           |
| Water vapour resistance factor (μ)    | -                    | approx. 366                              | approx. 1.1 MNs/g             |
| UV stability <sup>(1)</sup>           | EN 13859-1/2         | 3 months                                 | -                             |
| Exposure to weather <sup>(1)</sup>    | -                    | 4 weeks                                  | -                             |
| After ageing:                         |                      |  |                               |
| - watertightness                      | EN 1297 / EN 1928    | class W1                                 | -                             |
| - maximum tensile force MD/CD         | EN 1297 / EN 12311-1 | 295 / 225 N/50mm                         | 34 / 26 lb/in                 |
| - elongation                          | EN 1297 / EN 12311-1 | 45 / 47 %                                | -                             |
| Adhesion strength on steel at 180°    | EN 12316-2           | 12,5 N/cm                                | 7.1 lb/in                     |
| 180° adhesion force on proper support | EN 12316-2           | 8,5 N/cm                                 | 5 lb/in                       |
| Joint strength                        | EN 12317-2           | 132 N/50mm                               | 15 lb/in                      |
| Solvents                              | -                    | no                                       | -                             |
| Storage temperature                   | -                    | 5 / 25 °C                                | 41/77 °F                      |
| Application temperature               | -                    | -5 / 35 °C                               | 23 / 95 °F                    |

 $<sup>^{(1)}</sup>$  For the correlation between laboratory tests and actual conditions, see page 199.

Available in different configurations on request. It is possible to customise the mass per unit area of the membrane, the amount of acrylic glue, the size and the pre-cut of the liner.



## SPECIAL GLUE

The acrylic dispersion glue has a specific formulation to ensure breathability and does not alter the functions of the functional film inside the membrane.

## ■ RECOMMENDATIONS FOR INSTALLATION

## APPLICATION ON CEILING













SEALING FASTENING SYSTEMS





- 1 SPEEDY BAND 300, FLEXI BAND, PLASTER BAND
- PROTECT, BYTUM BAND PRIMER SPRAY, PRIMER

## ■ RECOMMENDATIONS FOR INSTALLATION

## APPLICATION AT A HOLE





1 MARLIN, CUTTER

### APPLICATION ON WALL













## I TRASPIR DOUBLE NET 270



## HIGHLY BREATHABLE MEMBRANE

















### DOUBLE REINFORCEMENT GRIDS

Thanks to its composition, the membrane is not affected by mechanical stress or by staples and nails.

#### **ANTISLIP**

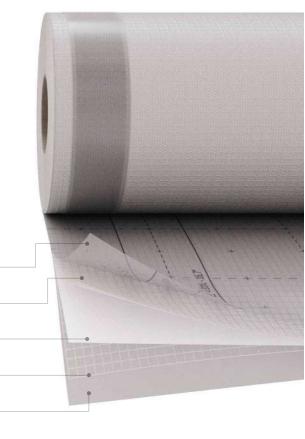
Rough surface for excellent sliding resistance thanks to the double polypropylene coating.

#### **SAFETY**

The high mass per unit offers good water resistance even during construction.

### COMPOSITION

top layer non-woven PP fabric reinforcing layer reinforcing PP grid middle layer PP breathable film reinforcing layer reinforcing PP grid bottom layer non-woven PP fabric



## CODES AND DIMENSIONS

| CODE   | description               | tape | Н   | L   | Α       | Н    | L    | Α                  |    |
|--------|---------------------------|------|-----|-----|---------|------|------|--------------------|----|
|        |                           |      | [m] | [m] | $[m^2]$ | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| T270   | TRASPIR DOUBLE NET 270    | -    | 1,5 | 50  | 75      | 5    | 164  | 807                | 16 |
| TTT270 | TRASPIR DOUBLE NET 270 TT | TT   | 1,5 | 50  | 75      | 5    | 164  | 807                | 16 |



## **OUICK SEALING**

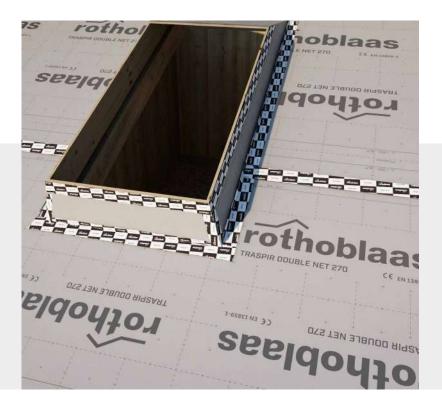
The TT version offers fast installation and professional sealing thanks to the integrated double tape.

### **FLEXIBILITY**

Although the membrane is very thick and resistant, its composition ensures great flexibility in processing without the risk of material wear.

| Properties                         | standard             | value  | USC conversion                      |
|------------------------------------|----------------------|--|-------------------------------------|
| Mass per unit area                 | EN 1849-2            | 270 g/m <sup>2</sup>                                 | 0.88 oz/ft <sup>2</sup>             |
| Thickness                          | EN 1849-2            | 1 mm   | 39 mil                              |
| Water vapour transmission (Sd)     | EN 1931              | 0,035 m  | 99.9 US perm                        |
| Maximum tensile force MD/CD        | EN 12311-1           | 650 / 800 N/50mm                                     | 74 / 91 lb/in                       |
| Elongation MD/CD                   | EN 12311-1           | 40 / 60 %  | -                                   |
| Resistance to nail tearing MD/CD   | EN 12310-1           | 750 / 550 N  | 169 / 124 lbf                       |
| Watertightness                     | EN 1928              | class W1   | -                                   |
| Temperature resistance             | -                    | -40 / 80 °C  | -40 / 176 °F                        |
| Reaction to fire                   | EN 13501-1           | class E  | -                                   |
| Resistance to penetration of air   | EN 12114             | $< 0.02 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.001 cfm/ft <sup>2</sup> at 50Pa |
| Thermal conductivity (λ)           | -                    | 0,3 W/(m·K)  | 0.17 BTU/h·ft·°F                    |
| Specific heat                      | ÷                    | 1800 J/(kg·K)  | -                                   |
| Density                            | -                    | approx. 260 kg/m <sup>3</sup>                        | approx. 0.16 oz/in <sup>3</sup>     |
| Water vapour resistance factor (μ) | -                    | approx. 35   | approx. 0.175 MNs/g                 |
| Joint strength                     | EN 12317-2           | > 550 N/50mm   | > 63 lb/in                          |
| VOC content                        | -                    | 0 %  | -                                   |
| UV stability <sup>(1)</sup>        | EN 13859-1/2         | 3 months   | -                                   |
| Exposure to weather <sup>(1)</sup> | -                    | 4 weeks  | -                                   |
| Water column                       | ISO 811              | > 500 cm   | > 197 in                            |
| After ageing:                      |                      |  |                                     |
| - watertightness                   | EN 1297 / EN 1928    | class W1   | -                                   |
| - maximum tensile force MD/CD      | EN 1297 / EN 12311-1 | 620 / 770 N/50mm                                     | 71 / 88 lb/in                       |
| - elongation                       | EN 1297 / EN 12311-1 | 35 / 55 %  | -                                   |
| Flexibility at low temperatures    | EN 1109              | -20 °C   | -4 °F                               |
| Driving rain test                  | TU Berlin            | passed   | -                                   |

 $<sup>^{(1)}</sup>$  For the correlation between laboratory tests and actual conditions, see page 199.



## MECHANICAL STRENGTH

The double reinforcing grid ensures maximum safety even during construction and in the event of high mechanical stresses.

## I TRASPIR EVO 300

HIGHLY BREATHABLE MONOLITHIC

























#### MONOLITHIC

**MEMBRANE** 

The monolithic structure of the membrane guarantees excellent durability over time, thanks to the special polymers used.

### 9 MONTHS UV STABILITY

9 months resistance to UV rays with full exposure to radiation and no protection. Heat-resistant up to 120 °C.

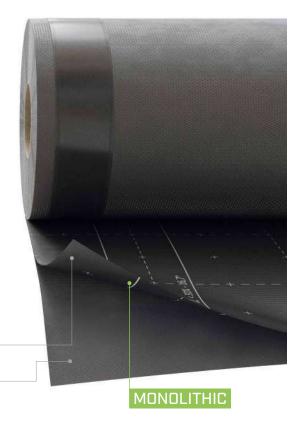
#### **EXCEPTIONAL TEMPERATURE RESISTANCE**

It passed the artificial ageing test involving exposure to UV light for 5000 hours. Heat-resistant up to 120 °C.

### COMPOSITION

top layer breathable monolithic acrylate film

middle layer PL fabric



## CODES AND DIMENSIONS

| CODE      | description        | tape | Н   | L   | Α       | Н    | L    | Α                  |    |
|-----------|--------------------|------|-----|-----|---------|------|------|--------------------|----|
|           |                    |      | [m] | [m] | $[m^2]$ | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| TEVO300   | TRASPIR EVO 300    | -    | 1,5 | 50  | 75      | 5    | 164  | 807                | 24 |
| TTTEVO300 | TRASPIR EVO 300 TT | TT   | 1,5 | 50  | 75      | 5    | 164  | 807                | 24 |



## **RELIABLE**

Waterproofing and mechanical strength guaranteed even near areas permanently exposed to the sun.

### SELF-EXTINGUISHING B-s1,d0

The special modified acrylic compound coupled with the polyester fabric makes the product self-extinguishing with fire reaction class B-s1,d0.

| Properties  | standard             | value  | USC conversion                      |
|---|----------------------|--|-------------------------------------|
| Mass per unit area  | EN 1849-2            | 300 g/m <sup>2</sup>                                 | 0.98 oz/ft <sup>2</sup>             |
| Thickness   | EN 1849-2            | 0,5 mm   | 20 mil                              |
| Water vapour transmission (Sd)  | EN 1931              | 0,04 m   | 87.413 US perm                      |
| Maximum tensile force MD/CD   | EN 12311-1           | 380 / 250 N/50mm                                     | 43 / 29 lb/in                       |
| Elongation MD/CD  | EN 12311-1           | 25 / 25 %  | -                                   |
| Resistance to nail tearing MD/CD  | EN 12310-1           | 160 / 190 N  | 36 / 43 lbf                         |
| Watertightness  | EN 1928              | class W1   | -                                   |
| Temperature resistance  | -                    | -40 / 120 °C   | -40 / 248 °F                        |
| Reaction to fire  | EN 13501-1           | class B-s1,d0  | -                                   |
| Resistance to penetration of air  | EN 12114             | $< 0.02 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.001 cfm/ft <sup>2</sup> at 50Pa |
| Thermal conductivity (λ)  | -                    | 0,3 W/(m·K)  | 0.17 BTU/h·ft·°F                    |
| Specific heat   | -                    | 1800 J/(kg·K)  | -                                   |
| Density   | -                    | approx. 600 kg/m <sup>3</sup>                        | approx. 0.35 oz/in <sup>3</sup>     |
| Water vapour resistance factor (µ)  | -                    | approx. 80   | approx. 0.2 MNs/g                   |
| Joint strength  | EN 12317-2           | > 280 N/50mm   | > 32 lb/in                          |
| VOC content   | -                    | 0 %  | -                                   |
| UV resistance without final coating <sup>(1)</sup>  | EN 13859-1/2         | 9 months   | -                                   |
| UV stability with joints up to 50 mm wide exposing no more than 40% of the surface $^{(2)}$ | EN 13859-1/2         | permanent  | -                                   |
| Weathering without final cladding (1)   | -                    | 16 weeks   | -                                   |
| Water column  | ISO 811              | > 500 cm   | > 197 in                            |
| After ageing:   |                      |  |                                     |
| - watertightness  | EN 1297 / EN 1928    | class W1   | -                                   |
| - maximum tensile force MD/CD   | EN 1297 / EN 12311-1 | 370 / 240 N/50mm                                     | 42 / 27 lb/in                       |
| - elongation  | EN 1297 / EN 12311-1 | 23 / 23 %  | -                                   |
| Flexibility at low temperatures   | EN 1109              | -40 °C   | -40 °F                              |
| Driving rain test   | TU Berlin            | passed   | -                                   |

<sup>(1)</sup> Membrane subjected to artificial ageing test for 5000h (standard 336h). For correlation between laboratory tests and actual conditions, see page 199.

### ■ FIRE PROTECTION



FIRE SEALING page 122 -124



FIRE FOAM page 118



FIRE STRIPE page 130



FRONT BAND UV 210 page 98



## THERMAL STABILITY

The functional polyacrylate film offers thermal resistance up to +120°C.

This allows the product to also be used under solar and photovoltaic panels, or in areas where operating temperatures exceed the standards, without compromising performance.

<sup>(2)</sup>The membrane is not suitable for standing water for long periods.

## I TRASPIR DOUBLE EVO 340







## MONOLITHIC AND MICROPOROUS BREATHABLE MEMBRANE

















### MONOLITHIC

The monolithic structure of the membrane guarantees excellent durability over time, thanks to the special polymers used.

#### LOW PITCHES

Thanks to its mass per unit area, it can also be effectively installed on roofs with pitches down to 5°.

#### **DOUBLE PROTECTION**

Double functional membrane for double watertightness and weather protection.

### COMPOSITION

top layer

non-woven PP fabric

middle layer

breathable monolithic TPE film

middle layer

non-woven PP fabric

middle layer

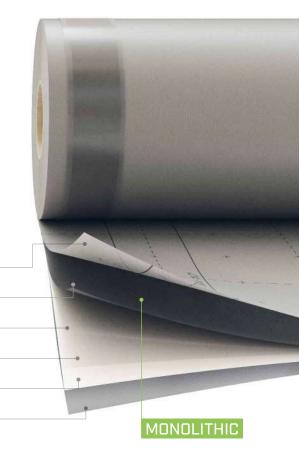
non-woven PP fabric

middle layer

PP breathable film

bottom layer

non-woven PP fabric



### CODES AND DIMENSIONS

| CODE      | description               | tape | Н   | L   | Α                 | Н    | L    | Α                  |    |
|-----------|---------------------------|------|-----|-----|-------------------|------|------|--------------------|----|
|           |                           |      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| TEVO340   | TRASPIR DOUBLE EVO 340    | -    | 1,5 | 25  | 37,5              | 5    | 82   | 404                | 20 |
| TTTEVO340 | TRASPIR DOUBLE EVO 340 TT | TT   | 1,5 | 25  | 37,5              | 5    | 82   | 404                | 20 |



### **RELIABLE**

High mass per unit area guarantees excellent protection even during construction.

### SAFETY

The double protection provided by the two functional films ensures superior watertightness.

| Properties                         | standard             | value   | USC conversion                  |
|------------------------------------|----------------------|---|---------------------------------|
| Mass per unit area                 | EN 1849-2            | 340 g/m <sup>2</sup>                              | 1.11 oz/ft <sup>2</sup>         |
| Thickness                          | EN 1849-2            | 1,2 mm  | 47 mil                          |
| Water vapour transmission (Sd)     | EN 1931              | 0,19 m  | 18.403 US perm                  |
| Maximum tensile force MD/CD        | EN 12311-1           | 605 / 455 N/50mm                                  | 69 / 52 lb/in                   |
| Elongation MD/CD                   | EN 12311-1           | 65 / 80 %   | -                               |
| Resistance to nail tearing MD/CD   | EN 12310-1           | 415 / 500 N                                       | 93 / 112 lbf                    |
| Watertightness                     | EN 1928              | class W1  | -                               |
| Temperature resistance             | -                    | -40 / 80 °C                                       | -40 / 176 °F                    |
| Reaction to fire                   | EN 13501-1           | class E   | -                               |
| Resistance to penetration of air   | EN 12114             | $< 0 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0 cfm/ft <sup>2</sup> at 50Pa |
| Thermal conductivity (λ)           | -                    | 0,04 W/(m·K)                                      | 0.02 BTU/h·ft·°F                |
| Specific heat                      | -                    | 1800 J/(kg·K)                                     | -                               |
| Density                            | -                    | approx. 284 kg/m <sup>3</sup>                     | approx. 0.16 oz/in³             |
| Water vapour resistance factor (µ) | -                    | approx. 160                                       | approx. 0.95 MNs/g              |
| Joint strength                     | EN 12317-2           | > 250 N/50mm                                      | > 28.5 lb/in                    |
| VOC content                        | -                    | 0 %   | -                               |
| UV stability <sup>(1)</sup>        | EN 13859-1/2         | 4 months  | -                               |
| Exposure to weather <sup>(1)</sup> | -                    | 8 weeks   | -                               |
| Water column                       | ISO 811              | > 600 cm  | > 236 in                        |
| After ageing:                      |                      |   |                                 |
| - watertightness at 100°C          | EN 1297 / EN 1928    | class W1  | -                               |
| - maximum tensile force MD/CD      | EN 1297 / EN 12311-1 | 550 / 400 N/50mm                                  | 63 / 46 lb/in                   |
| - elongation                       | EN 1297 / EN 12311-1 | 37 / 51 %   | -                               |
| Flexibility at low temperatures    | EN 1109              | -40 °C  | -40 °F                          |

 $<sup>^{(1)}</sup>$  For the correlation between laboratory tests and actual conditions, see page 199.

## ■ RELATED PRODUCTS









## HIGH PERFORMANCE

The high mass per unit area and the double functional layer guarantee high protection and abrasion resistance. The monolithic membrane meets the most strict requirements of the various national regulations, classifying it as a very high performance product.

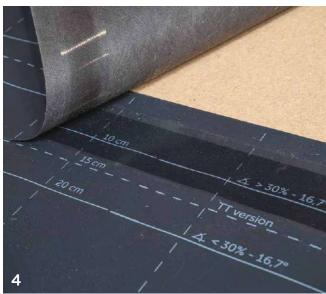
## ■ RECOMMENDATIONS FOR INSTALLATION: TRASPIR

APPLICATION ON ROOF - EXTERNAL SIDE















- 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
- ${f 5b}$  RASY BAND, SPEEDY BAND ,FLEXI BAND, FLEXI BAND UV, SOLID BAND, PLASTER BAND ROLLER
- DOUBLE BAND, SUPRA BAND, BUTYL BAND 5c OUTSIDE GLUE

## ■ RECOMMENDATIONS FOR INSTALLATION: ROOF

### TRANSVERSAL HEAD OVERLAPPING SEALING









4 EASY BAND, SPEEDY BAND, FLEXI BAND, FLEXI BAND UV, SOLID BAND, PLASTER BAND

### SEALING FASTENING SYSTEMS





GEMINI





NAIL PLASTER, NAIL BAND

## I TRASPIR WELD EVO 360

WELDABLE MONOLITHIC BREATHABLE

























#### MONOLITHIC

**MEMBRANE** 

The monolithic structure of the membrane guarantees excellent durability over time, thanks to the special polymers used.

### **DOUBLE PROTECTION**

Excellent watertightness; the double external PU layer ensures the highest safety levels.

#### **LOW PITCHES**

Thanks to its mass per unit area, the membrane can also be effectively installed on roofs with pitches down to 5°.

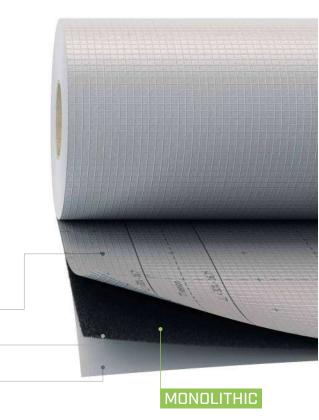
## COMPOSITION

top layer breathable monolithic PU film

middle layer PL fabric

bottom layer

breathable monolithic PU film



### CODES AND DIMENSIONS

| CODE      | description                | tape | Н   | L   | Α                 | Н    | L    | Α                  | <b>655</b> |
|-----------|----------------------------|------|-----|-----|-------------------|------|------|--------------------|------------|
|           |                            |      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |            |
| TEVO360   | TRASPIR WELD EVO 360       | -    | 1,5 | 25  | 37,5              | 5    | 82   | 404                | 24         |
| TEVO36030 | TRASPIR WELD EVO 360 3,0 m | -    | 3   | 25  | 75                | 10   | 82   | 807                | 24         |



### COMPLETE SYSTEM

Waterproofing with TRASPIR WELD EVO 360 means creating a safe, effective and complete system with sleeves and sealing of the battens by sealing.

### FUNCTIONAL FILM SEALING

The membrane allows the two functional TPU films to be sealed together on the outer edges to prevent humidity absorption.

### **■ TECHNICAL DATA**

| Properties                          | standard             | value   | USC conversion                  |
|-------------------------------------|----------------------|---|---------------------------------|
| Mass per unit area                  | EN 1849-2            | 360 g/m <sup>2</sup>                            | 1.18 oz/ft²                     |
| Thickness                           | EN 1849-2            | 1 mm  | 39 mil                          |
| Water vapour transmission (Sd)      | EN 1931              | 0,2 m   | 17.483 US perm                  |
| Maximum tensile force MD/CD         | EN 12311-1           | 420 / 490 N/50mm                                | 48 / 56 lb/in                   |
| Elongation MD/CD                    | EN 12311-1           | 50 / 65 %                                       | -                               |
| Resistance to nail tearing MD/CD    | EN 12310-1           | 310 / 280 N                                     | 70 / 63 lbf                     |
| Watertightness                      | EN 1928              | class W1  | -                               |
| Temperature resistance              | -                    | -40 / 100 °C                                    | -40 / 212 °F                    |
| Reaction to fire                    | EN 13501-1           | class E   | -                               |
| Resistance to penetration of air    | EN 12114             | $0 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | 0 cfm/ft <sup>2</sup> at 50Pa   |
| Thermal conductivity (λ)            | -                    | 0,4 W/(m·K)                                     | 0.23 BTU/h·ft·°F                |
| Specific heat                       | -                    | 1800 J/(kg·K)                                   | -                               |
| Density                             | -                    | approx. 360 kg/m <sup>3</sup>                   | approx. 0.21 oz/in <sup>3</sup> |
| Water vapour resistance factor (μ)  | -                    | approx. 200                                     | approx. 1 MNs/g                 |
| Joint strength                      | EN 12317-2           | > 490 N/50mm                                    | > 56 lb/in                      |
| UV stability <sup>(1)</sup>         | EN 13859-1/2         | 6 months  | -                               |
| Exposure to weather <sup>(1)</sup>  | -                    | 12 weeks  | -                               |
| Water column                        | ISO 811              | > 300 cm  | > 118 in                        |
| After ageing:                       |                      |   |                                 |
| - watertightness                    | EN 1297 / EN 1928    | class W1  | -                               |
| - maximum tensile force MD/CD       | EN 1297 / EN 12311-1 | 400 / 470 N/50mm                                | 46 / 54 lb/in                   |
| - elongation                        | EN 1297 / EN 12311-1 | 50 / 65 %                                       | -                               |
| Flexibility at low temperatures     | EN 1109              | -30 °C  | -22 °F                          |
| Driving rain test                   | TU Berlin            | passed  | -                               |
| WELD LIQUID application temperature | -                    | 10 / 25 °C                                      | -                               |
| WELD LIQUID yield                   | -                    | approx. 150/180 m <sup>2</sup> /                | L -                             |

<sup>(1)</sup> For the correlation between laboratory tests and actual conditions, see page 199.

### ■ RELATED PRODUCTS



WELDING BOTTLE BRUSH
WELDBOTBRUSH
content: 0,5 L
pcs/pckg 1





WELDING BRUSH WELDBRUSH sizes: 4 cm pcs/pckg 1

MANICA FLEX - TPU MANFTPU300 MANFTPU430



WELDING LIQUID WELDLIQUID content: 1,0 L pcs/pckg 1



WELDING STRIPE WELDSTRIPE300 sizes: 0,30 x 20 m pcs/pckg 5



WELDING PIPE SLEEVE WELDPIPE diameter: 80 -125 mm pcs/pckg 4



# HOT WELDING AND CHEMICAL WELDING

The double polyurethane membrane offers perfect welding on all overlapping and joints. With the possibility of both hot and chemical welding, the product makes it possible to create a single solid protective layer that is highly reliable, returning continuity to the various layers.

### ■ RECOMMENDATIONS FOR INSTALLATION

### SEALING OF MEMBRANE





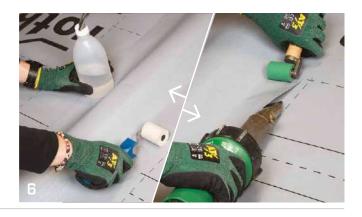




1 WELDBOTHBRUSH, WELDBRUSH, WELDLIQUID

### SOLUTION A: SEALING BATTEN WITH WELD STRIPE





- **5** WELDSTRIPE300
- 6 WELDBOTHBRUSH, WELDBRUSH, WELDLIQUID

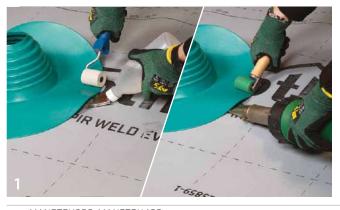
### SOLUTION B: SEALING BATTEN WITH NAIL POINT TAPE

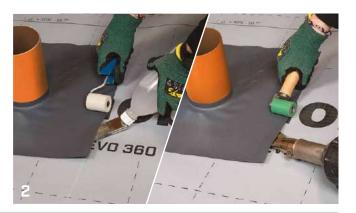




7 NAIL PLASTER

### SLEEVE SEALING

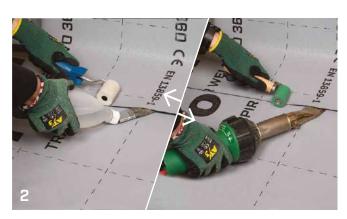




MANFTPU300, MANFTPU430 WELDBOTHBRUSH, WELDBRUSH, WELDLIQUID

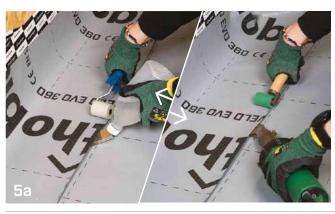
### **CHIMNEY SEALING**













- 2 WELDBOTHBRUSH, WELDBRUSH, WELDLIQUID
- 3 EASY BAND, SPEEDY BAND, FLEXI BAND, FLEXI BAND UV, SOLID BAND, PLASTER BAND
- **5a** WELDBOTHBRUSH, WELDBRUSH, WELDLIQUID
- **5b** EASY BAND, FLEXI BAND, FLEXI BAND UV, SOLID BAND, PLASTER BAND

# TRASPIR ALU FIRE A2 430



### REFLECTIVE HIGHLY BREATHABLE **MEMBRANE**



















### NON-COMBUSTIBLE A2-s1,d0

Membrane tested according to EN 13501-1 and classified as non-combustible material.

### **REFLECTIVE**

Thanks to its ability to reflect up to 95% of the heat, it improves the thermal performance of the construction panels.

### HIGH MASS PER UNIT

With a value of 430 g/m<sup>2</sup>, it is an extremely robust, thermally stable and stress-resistant product during installation.

### COMPOSITION

protection layer perforated aluminium film

middle layer PE functional film

bottom layer fibreglass fabric



### CODES AND DIMENSIONS

| CODE        | description             | tape | Н   | L   | Α                 | Н    | L    | Α                  |    |
|-------------|-------------------------|------|-----|-----|-------------------|------|------|--------------------|----|
|             |                         |      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| TALUFIRE430 | TRASPIR AUL FIRE A2 430 | -    | 1,2 | 50  | 60                | 4    | 164  | 646                | 24 |



### **UV STABILITY**

The special modified mix ensures high UV stability even if left exposed on site or if there are cracks or open joints in the claddings.

### SAFETY

As it is a non-combustible membrane, it can also be applied in combination with photovoltaic systems or at electrical voltage points.

### ■ TECHNICAL DATA

| Properties  | standard             | value   | USC conversion   |
|---|----------------------|---|--|
| Mass per unit area  | EN 1849-2            | 430 g/m <sup>2</sup>  | 1.41 oz/ft <sup>2</sup>  |
| Thickness   | EN 1849-2            | 0,43 mm   | 17 mil   |
| Water vapour transmission (Sd)  | EN 1931              | 0,08 m  | 43.706 US perm   |
| Maximum tensile force MD/CD   | EN 12311-1           | 3000 / 3200 N/50mm  | 343 / 365 lb/in  |
| Elongation MD/CD  | EN 12311-1           | 6 / 5 %   | -  |
| Resistance to nail tearing MD/CD  | EN 12310-1           | 580 / 450 N   | 130 / 101 lbf  |
| Watertightness  | EN 1928              | class W1  | -  |
| Temperature resistance  | -                    | -40 / 100 °C  | -40 / 212 °F   |
| Reaction to fire  | EN 13501-1           | class A2-s1,d0  | -  |
| Resistance to penetration of air  | EN 12114             | $> 0.02 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$  | > 0.001 cfm/ft <sup>2</sup> at 50Pa                              |
| Thermal conductivity (λ)  | -                    | 0,0007 W/(m·K)  | 0 BTU/h·ft·°F  |
| Specific heat   | -                    | 800 J/(kg·K)  | -  |
| Density   | -                    | 1000 kg/m <sup>3</sup>  | approx. 0.58 oz/in <sup>3</sup>                                  |
| Water vapour resistance factor (μ)  | -                    | approx. 185   | approx. 0.4 MNs/g  |
| VOC content   | -                    | 0 %   | -  |
| Reflectivity  | EN 15976             | 95 %  | -  |
| Equivalent thermal resistance with 50mm air gap $(\epsilon_{other\ surface}\ 0.025-0.88)$ | ISO 6946             | R <sub>g,0,025</sub> : 0,821 (m <sup>2</sup> K)/W<br>R <sub>g,0,88</sub> : 0,731 (m <sup>2</sup> K)/W | 4.66 h·ft <sup>2</sup> ·°F/BTU<br>4.15 h·ft <sup>2</sup> ·°F/BTU |
| UV resistance without final coating <sup>(1)</sup>  | EN 13859-1/2         | 9 months  | -  |
| UV stability with joints up to 60 mm wide exposing no more than 60 % of the surface       | EN 13859-1/2         | permanent   | -  |
| Weathering without final cladding (1)   | -                    | 16 weeks  | -  |
| After ageing:   |                      |   |  |
| - watertightness  | EN 1297 / EN 1928    | class W1  | -  |
| - maximum tensile force MD/CD   | EN 1297 / EN 12311-1 | 3000 / 3200 N/50mm  | 343 / 365 lb/in  |
| - elongation  | EN 1297 / EN 12311-1 | 6 / 5 %   | -  |
| Flexibility at low temperatures   | EN 1109              | -40 °C  | -40 °F   |

<sup>(1)</sup> For the correlation between laboratory tests and actual conditions, see page 199.

### ■ FIRE PROTECTION



FIRE SEALING page 122 -124



FIRE FOAM page 118



FIRE STRIPE page 130



FRONT BAND UV 210 page 98



### MECHANICAL STRENGTH

The combination of aluminium cladding and glass fibre reinforcement ensures high mechanical performance.

# I TRASPIR METAL

3D MATS FOR METAL ROOFS

# ISTITUTO GIORDANO



















### **CERTIFIED NOISE REDUCTION**

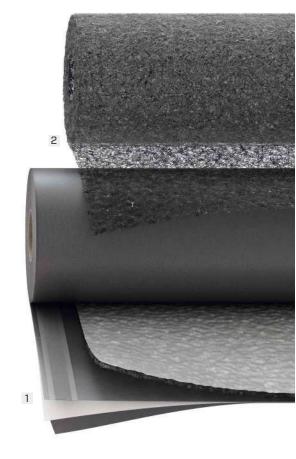
The 3D mats guarantee reduction of airborne and heavy rain noises. Values tested and certified.

### PROTECTIVE FELT

The breathable membrane with 3D grid includes a fifth layer that blocks impurities and improves ventilation.

### HIGH DENSITY 3D GRID

The 3D mat has high mechanical strength and is also appropriate for aluminium sheet metal.



### CODES AND DIMENSIONS

| CODE        | description        | tape | Н    | L   | Α       | Н    | L      | Α                  | 656 |
|-------------|--------------------|------|------|-----|---------|------|--------|--------------------|-----|
|             |                    |      | [m]  | [m] | $[m^2]$ | [ft] | [ft]   | [ft <sup>2</sup> ] |     |
| 1 TTTMET610 | TRASPIR 3D COAT TT | TT   | 1,35 | 33  | 44,55   | 4.43 | 108.27 | 479.54             | 4   |
| 2 NET350    | NET 350            | -    | 1,25 | 50  | 62,5    | 4.11 | 164    | 672.75             | 4   |



### SAFE VENTILATION

The breathable membrane TRASPIR 3D COAT comes with a 3D grid and a protective felt on the surface, that prevents the entry of impurities and improves ventilation.

### **VERSATILE**

Also ideal in combination with BYTUM or TRASPIR to create a micro-ventilation layer in both wall and roof installations.

### ■ RECOMMENDATIONS FOR INSTALLATION

### TRASPIR 3D COAT





HAMMER STAPLER 47, HAMMER STAPLER 22, HAND STAPLER, STAPLES

### 3D NET





CHIMNEY DETAIL WITH TRASPIR 3D COAT









- MARLIN, CUTTER
- TRASPIR NET 160, TRASPIR EVO 160, TRASPIR 200, TRASPIR EVO SEAL 200, TRASPIR EVO 220, TRASPIR ADHESIVE 260, TRASPIR DOUBLE NET 260, TRASPIR EVO 300, TRASPIR DOUBLE EVO 340
- 3
- 4 EASY BAND, FLEXI BAND, FLEXI BAND UV, FACADE BAND, PLASTER BAND

# TRASPIR 3D COAT TT

### COMPOSITION

protection layer non-woven PP fabric

middle layer

3-dimensional PP mat

protection layer

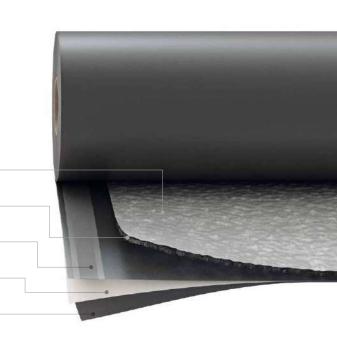
non-woven PP fabric

middle layer

PP breathable film

bottom layer

non-woven PP fabric



### ■ TECHNICAL DATA

| Properties   | standard                | value  | USC conversion                      |
|--|-------------------------|--|-------------------------------------|
| Mass per unit area   | EN 1849-2               | 610 g/m <sup>2</sup>                                 | 1.2 oz/ft <sup>2</sup>              |
| Thickness  | EN 1849-2               | 8 mm   | 315 mil                             |
| Water vapour transmission (Sd)   | EN 1931                 | 0,02 m   | 174.825 US perm                     |
| Maximum tensile force MD/CD  | EN 12311-1              | 325 / 225 N/50mm                                     | 37 / 26 lb/in                       |
| Elongation MD/CD   | EN 12311-1              | 45 / 70 %  | -                                   |
| Resistance to nail tearing MD/CD   | EN 12310-1              | 185 / 195 N  | 42 / 44 lbf                         |
| Watertightness   | EN 1928                 | class W1   | -                                   |
| Temperature resistance   | -                       | -30 / 80 °C  | -22 / 176 °F                        |
| Reaction to fire   | EN 13501-1              | class E  | -                                   |
| Resistance to penetration of air   | EN 12114                | $< 0.02 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | < 0.001 cfm/ft <sup>2</sup> at 50Pa |
| Thermal conductivity (λ)   | -                       | 0,3 W/(m·K)  | 0,17 BTU/h·ft·°F                    |
| Specific heat  | -                       | 1800 J/(kg·K)  | -                                   |
| Density  | -                       | approx. 65 kg/m <sup>3</sup>                         | approx. 0.04 oz/in <sup>3</sup>     |
| Water vapour resistance factor (μ)   | -                       | approx. 33   | approx. 0.1 MNs/g                   |
| VOC content  | -                       | < 0,02 %   | -                                   |
| UV stability <sup>(1)</sup>  | EN 13859-1/2            | 3 months   | -                                   |
| Exposure to weather <sup>(1)</sup>   | -                       | 2 weeks  | -                                   |
| Water column   | ISO 811                 | > 250 cm   | > 98.4252 in                        |
| After ageing:  |                         |  |                                     |
| - watertightness   | EN 1297 / EN 1928       | class W1   | -                                   |
| - maximum tensile force MD/CD  | EN 1297 / EN 12311-1    | 285 / 195 N/50mm                                     | 33 / 22 lb/in                       |
| - elongation   | EN 1297 / EN 12311-1    | 35 / 30 %  | -                                   |
| Flexibility at low temperatures  | EN 1109                 | -30 °C   | -22 °F                              |
| Void ratio   | -                       | 95 %   | -                                   |
| Variation of the sound reduction index $\Delta R_{\text{w}}$                                       | ISO 10140-2 / ISO 717-1 | 1 dB   | -                                   |
| Variation in overall A-weighted sound intensity level from heavy rain noise $\Delta L_{i\text{A}}$ | ISO 140-18              | approx. 4 dB   | -                                   |
| Impact sound attenuation index $\Delta L_w$  | ISO 140-8               | 28 dB  | -                                   |

 $<sup>^{(1)}</sup>$  For the correlation between laboratory tests and actual conditions, see page 199.

## 3D NET



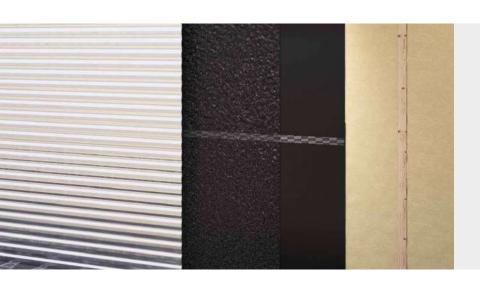
### COMPOSITION

3D grid 3-dimensional PP mat

### ■ TECHNICAL DATA

| Properties   | standard                |                              |                                 |
|--|-------------------------|------------------------------|---------------------------------|
| Mass per unit area   | EN 1849-2               | 350 g/m <sup>2</sup>         | 1.15 oz/ft <sup>2</sup>         |
| Thickness  | EN 1849-2               | 7.5 mm                       | 295 mil                         |
| Maximum tensile force MD/CD NET  | EN 12311-1              | 1,3 / 0,5 N/50mm             | 0.15 / 0.06 lb/in               |
| Elongation MD/CD NET   | EN 12311-1              | 95 / 65 %                    | -                               |
| Temperature resistance   | -                       | -40 / 80 °C                  | -40 / 176 °F                    |
| Reaction to fire   | EN 13501-1              | class F                      | -                               |
| Density  | -                       | approx. 35 kg/m <sup>3</sup> | approx. 0.02 oz/in <sup>3</sup> |
| VOC emissions  | -                       | < 0,02 %                     | -                               |
| UV stability <sup>(1)</sup>  | EN 13859-1/2            | 3 months                     | -                               |
| Exposure to weather <sup>(1)</sup>   | -                       | 4 weeks                      | -                               |
| Void ratio   | -                       | 95 %                         | -                               |
| Variation of the sound reduction index $\Delta R_{\text{w}}$                                       | ISO 10140-2 / ISO 717-1 | 1 dB                         | -                               |
| Variation in overall A-weighted sound intensity level from heavy rain noise $\Delta L_{i\text{A}}$ | ISO 140-18              | 4 dB                         | -                               |
| Impact sound attenuation index $\Delta L_w$  | ISO 140-8               | 28 dB                        | -                               |

 $<sup>^{(1)}</sup>$  For the correlation between laboratory tests and actual conditions, see page 199.



### **DURABILITY**

When installed on a continuous support, it promotes micro-ventilation of metal roofs, preventing corrosion.

# LABORATORY MEASUREMENTS



### AIRBORNE ACOUSTIC INSULATION AND NOISE GENERATED BY HEAVY RAIN

The test sample is identified by a 5,60 x 3,65 m timber roof positioned between an emitting room (PHOTO 1) and a receiving room, able to emit and record the sound stress applied during the tests.

Shown below are the layers tested in the two versions: the first with the TRASPIR METAL and the second with the sheet metal directly on the plank.

- 1 0,6 mm thick zinc plated steel metal sheet
- 2 8 mm thick TRASPIR METAL membrane
- 3 20 mm thick pine beads
- 4 60 mm thick pine battens
- 5 Rothoblaas breathable membrane
- 6 22 mm thick 200 kg/m<sup>3</sup> timber fibre
- 7 180 mm thick 110 kg/m<sup>3</sup> timber fibre
- B Rothoblaas vapour control layer
- 9 20 mm thick pine beads
- 10 200 mm thick laminated pine beam



### TESTS PERFORMED

The following measuring tests have been performed on both layers, with and without TRASPIR METAL:

- 1. Airborne acoustic insulation according to EN ISO 10140-2:2010 and EN ISO 717-1:2013 on roof. The result is a soundproofing power index of  $R_{\rm W}$  for the layer. Accordingly, the higher the value the better the acoustic insulation.
- 2. Noise generated by heavy rain according to EN ISO 140-18:2007: in this test you obtain a value indicating the sound pressure level  $L_{IA}$  recorded in the receiving room during the pounding of water, simulated by a tank placed over the sample.

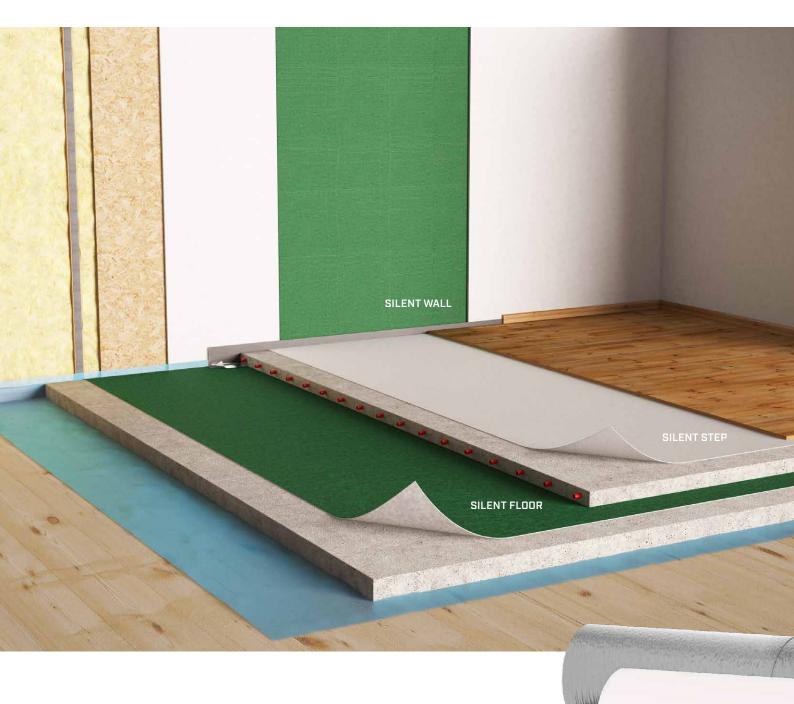


PHOTO 1: Photo of sample, emitting room side

|    | RE | SULTS             |      | WITHOUT MEM                | WITH MEMBRANE                             |                        |                           |
|----|----|-------------------|------|----------------------------|---|------------------------|---------------------------|
| 1. | ×  | AIRBORNE<br>NOISE | 2//  | (i) R <sub>W</sub> = 43 dB | 2)  | R <sub>W</sub> = 44 dB |                           |
| 2. | Ť  | HEAVY<br>RAIN     | **// | L <sub> A</sub> = 36,9 dB  | Reduction of noise from rain up to 4.2 dB | 111 Mg                 | L <sub>IA</sub> = 32,7 dB |

NOTE: The full test report is available from the Rothoblaas technical department.

# SILENT, IN NAME AND IN FACT



In our "Acoustic Solutions" catalogue you can find all our soundproofing membranes: from the SILENT FLOOR underscreed range to the SILENT STEP underfloor solutions and the SILENT WALL family for wall noise reduction. Discover how good life is at home with the right acoustic comfort!

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SILENT

STEP

# **BITUMINOUS**

# **I** BITUMINOUS

| BYTUM 400 BITUMINOUS UNDERLAY CONTROL LAYER               |
|---|
| BITUMINOUS UNDERLAY CONTROL LAYER                         |
| BYTUM 750  BITUMINOUS UNDERLAY CONTROL LAYER              |
| BYTUM 1100 BITUMINOUS UNDERLAY CONTROL LAYER              |
| BYTUM 1500 BITUMINOUS UNDERLAY CONTROL LAYER              |
| BYTUM 2000 BITUMINOUS UNDERLAY CONTROL LAYER              |
| BYTUM BASE 2500 SELF-ADHESIVE BITUMINOUS MEMBRANE         |
| BYTUM SLATE 3500 SELF-ADHESIVE SLATED BITUMINOUS MEMBRANE |
| SHINGLE BITUMINOUS TILE                                   |

# **BYTUM 400**



### BITUMINOUS UNDERLAY CONTROL LAYER



















### COMPOSITION





### ■ TECHNICAL DATA

| Properties                         | standard             | value                                    | USC conversion                  |
|------------------------------------|----------------------|--|---------------------------------|
| Mass per unit area                 | EN 1849-1            | 400 g/m <sup>2</sup>                     | 1.31 oz/ft <sup>2</sup>         |
| Thickness                          | EN 1849-2            | 0,6 mm                                   | 24 mil                          |
| Water vapour transmission (Sd)     | EN 1931              | 22 m                                     | 0.159 US perm                   |
| Maximum tensile force MD/CD        | EN 12311-1           | 500 / 400 N/50mm                         | 57 / 46 lb/in                   |
| Elongation MD/CD                   | EN 12311-1           | 45 / 50 %                                | -                               |
| Resistance to nail tearing MD/CD   | EN 12310-1           | 200 / 200 N                              | 45 / 45 lbf                     |
| Watertightness                     | EN 1928              | class W1                                 | -                               |
| Temperature resistance             | -                    | -40 / 100 °C                             | -40 / 212 °F                    |
| Reaction to fire                   | EN 13501-1           | class E                                  | -                               |
| Resistance to penetration of air   | EN 12114             | 0 m <sup>3</sup> /(m <sup>2</sup> h50Pa) | 0 cfm/ft <sup>2</sup> at 50Pa   |
| Thermal conductivity (λ)           | -                    | 0,2 W/(m·K)                              | 0.12 BTU/h·ft·°F                |
| Specific heat                      | -                    | 120 J/(kg·K)                             | -                               |
| Density                            | -                    | approx. 600 kg/m <sup>3</sup>            | approx. 0.35 oz/in <sup>3</sup> |
| Water vapour resistance factor (µ) | -                    | approx. 36000                            | approx. 110 MNs/g               |
| UV stability <sup>(1)</sup>        | EN 13859-1/2         | 4 months                                 | -                               |
| Exposure to weather <sup>(1)</sup> | -                    | 3 weeks                                  | -                               |
| After ageing:                      |                      |  |                                 |
| - watertightness                   | EN 1297 / EN 1928    | class W1                                 | -                               |
| - maximum tensile force MD/CD      | EN 1297 / EN 12311-1 | 450 / 350 N/50mm                         | 51 / 40 lb/in                   |
| - elongation                       | EN 1297 / EN 12311-1 | 35 / 40 %                                | -                               |
| Flexibility at low temperatures    | EN 1109              | -40 °C                                   | -40 °F                          |

 $<sup>^{(1)}</sup>$  For the correlation between laboratory tests and actual conditions, see page 199.

Store the product in a dry, covered location. The rolls must be transported and stored in a vertical position.

### **■ CODES AND DIMENSIONS**

| CODE   | description | tape | Н   | L   | Α       | Н    | L    | Α                  |    |
|--------|-------------|------|-----|-----|---------|------|------|--------------------|----|
|        |             |      | [m] | [m] | $[m^2]$ | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| BYT400 | BYTUM 400   | -    | 1   | 50  | 50      | 3.3  | 164  | 538                | 20 |

# **I BYTUM 750**



## BITUMINOUS UNDERLAY CONTROL LAYER



















### COMPOSITION





### ■ TECHNICAL DATA

| Properties                         | standard             | value   | USC conversion                  |
|------------------------------------|----------------------|---|---------------------------------|
| Mass per unit area                 | EN 1849-2            | 750 g/m <sup>2</sup>                            | 2.46 oz/ft <sup>2</sup>         |
| Thickness                          | EN 1849-2            | 0,8 mm  | 31 mil                          |
| Water vapour transmission (Sd)     | EN 1931              | 38 m  | 0.092 US perm                   |
| Maximum tensile force MD/CD        | EN 12311-1           | 500 / 400 N/50mm                                | 57 / 46 lb/in                   |
| Elongation MD/CD                   | EN 12311-1           | 45 / 50 %                                       | -                               |
| Resistance to nail tearing MD/CD   | EN 12310-1           | 200 / 200 N                                     | 45 / 45 lbf                     |
| Watertightness                     | EN 1928              | class W1  | -                               |
| Temperature resistance             | -                    | -40 / 100 °C                                    | -40 / 212 °F                    |
| Reaction to fire                   | EN 13501-1           | class E   | -                               |
| Resistance to penetration of air   | EN 12114             | $0 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | 0 cfm/ft <sup>2</sup> at 50Pa   |
| Thermal conductivity (λ)           | -                    | 0,2 W/(m·K)                                     | 0.12 BTU/h·ft·°F                |
| Specific heat                      | -                    | 120 J/(kg·K)                                    | -                               |
| Density                            | -                    | approx. 935 kg/m <sup>3</sup>                   | approx. 0.35 oz/in <sup>3</sup> |
| Water vapour resistance factor (μ) | -                    | approx. 47500                                   | approx. 190 MNs/g               |
| UV stability <sup>(1)</sup>        | EN 13859-1/2         | 4 months  | -                               |
| Exposure to weather <sup>(1)</sup> | -                    | 3 weeks   | -                               |
| After ageing:                      |                      |   |                                 |
| - watertightness                   | EN 1297 / EN 1928    | class W1  | -                               |
| - maximum tensile force MD/CD      | EN 1297 / EN 12311-1 | 450 / 350 N/50mm                                | 51 / 40 lb/in                   |
| - elongation                       | EN 1297 / EN 12311-1 | 35 / 40 %                                       | -                               |
| Flexibility at low temperatures    | EN 1109              | -45 °C  | -49 °F                          |

 $<sup>^{(1)}</sup>$  For the correlation between laboratory tests and actual conditions, see page 199.

Store the product in a dry, covered location. The rolls must be transported and stored in a vertical position.

### **■ CODES AND DIMENSIONS**

| CODE     | description  | tape | Н   | L   | Α       | Н    | L    | Α                  |    |
|----------|--------------|------|-----|-----|---------|------|------|--------------------|----|
|          |              |      | [m] | [m] | $[m^2]$ | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| BYTTT750 | BYTUM 750 TT | TT   | 1   | 40  | 40      | 3.3  | 131  | 431                | 20 |

# **BYTUM 1100**



## BITUMINOUS UNDERLAY CONTROL LAYER



















### COMPOSITION





### ■ TECHNICAL DATA

| Properties                         | standard             | value   | USC conversion                  |
|------------------------------------|----------------------|---|---------------------------------|
| ·                                  |                      |   |                                 |
| Mass per unit area                 | EN 1849-2            | 1100 g/m <sup>2</sup>                           | 3.6 oz/ft <sup>2</sup>          |
| Thickness                          | EN 1849-2            | 1,1 mm  | 43 mil                          |
| Water vapour transmission (Sd)     | EN 1931              | 55 m  | 0.064 US perm                   |
| Maximum tensile force MD/CD        | EN 12311-1           | 650 / 500 N/50mm                                | 74 / 57 lb/in                   |
| Elongation MD/CD                   | EN 12311-1           | 45 / 50 %                                       | -                               |
| Resistance to nail tearing MD/CD   | EN 12310-1           | 230 / 230 N                                     | 52 / 52 lbf                     |
| Watertightness                     | EN 1928              | class W1  | -                               |
| Temperature resistance             | -                    | -40 / 100 °C                                    | -40 / 212 °F                    |
| Reaction to fire                   | EN 13501-1           | class E   | -                               |
| Resistance to penetration of air   | EN 12114             | $0 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | 0 cfm/ft <sup>2</sup> at 50Pa   |
| Thermal conductivity (λ)           | -                    | 0,2 W/(m·K)                                     | 0.12 BTU/h·ft·°F                |
| Specific heat                      | -                    | 120 J/(kg·K)                                    | -                               |
| Density                            | -                    | approx. 1000 kg/m <sup>3</sup>                  | approx. 0.58 oz/in <sup>3</sup> |
| Water vapour resistance factor (μ) | -                    | approx. 50000                                   | approx. 275 MNs/g               |
| UV stability <sup>(1)</sup>        | EN 13859-1/2         | 4 months  | -                               |
| Exposure to weather <sup>(1)</sup> | -                    | 3 weeks   | -                               |
| After ageing:                      |                      |   |                                 |
| - watertightness                   | EN 1297 / EN 1928    | class W1  | -                               |
| - maximum tensile force MD/CD      | EN 1297 / EN 12311-1 | 600 / 450 N/50mm                                | 69 / 51 lb/in                   |
| - elongation                       | EN 1297 / EN 12311-1 | 35 / 40 %                                       | -                               |
| Flexibility at low temperatures    | EN 1109              | -45 °C  | -49 °F                          |

 $<sup>^{(1)}</sup>$  For the correlation between laboratory tests and actual conditions, see page 199.

Store the product in a dry, covered location. The rolls must be transported and stored in a vertical position.

### CODES AND DIMENSIONS

| CODE    | description | tape | Н   | L   | Α       | Н    | L    | Α                  |    |
|---------|-------------|------|-----|-----|---------|------|------|--------------------|----|
|         |             |      | [m] | [m] | $[m^2]$ | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| BYT1100 | BYTUM 1100  | -    | 1   | 25  | 25      | 3.3  | 82   | 270                | 24 |

# **BYTUM 1500**



## BITUMINOUS UNDERLAY CONTROL LAYER



















### COMPOSITION



bottom layer non-woven PP fabric



### ■ TECHNICAL DATA

| Properties                         | standard             | value   | USC conversion                  |
|------------------------------------|----------------------|---|---------------------------------|
| Mass per unit area                 | EN 1849-1            | 1500 g/m <sup>2</sup>                           | 4.92 oz/ft <sup>2</sup>         |
| Thickness                          | EN 1849-2            | 1,3 mm  | 51 mil                          |
| Water vapour transmission (Sd)     | EN 1931              | 120 m   | 0.029 US perm                   |
| Maximum tensile force MD/CD        | EN 12311-1           | 600 / 400 N/50mm                                | 69 / 46 lb/in                   |
| Elongation MD/CD                   | EN 12311-1           | 40 / 40 %                                       | -                               |
| Resistance to nail tearing MD/CD   | EN 12310-1           | 220 / 230 N                                     | 49 / 52 lbf                     |
| Watertightness                     | EN 1928              | class W1  | -                               |
| Temperature resistance             | -                    | -40 / 100 °C                                    | -40 / 212 °F                    |
| Reaction to fire                   | EN 13501-1           | class E   | -                               |
| Resistance to penetration of air   | EN 12114             | $0 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | 0 cfm/ft <sup>2</sup> at 50Pa   |
| Thermal conductivity (λ)           | -                    | 0,2 W/(m·K)                                     | 0.12 BTU/h·ft·°F                |
| Specific heat                      | -                    | 175 J/(kg·K)                                    | -                               |
| Density                            | -                    | approx. 1150 kg/m <sup>3</sup>                  | approx. 0.66 oz/in <sup>3</sup> |
| Water vapour resistance factor (μ) | -                    | approx. 20000                                   | approx. 600 MNs/g               |
| UV stability <sup>(1)</sup>        | EN 13859-1/2         | 3 months  | -                               |
| Exposure to weather <sup>(1)</sup> | -                    | 3 weeks   | -                               |
| After ageing:                      |                      |   |                                 |
| - watertightness                   | EN 1297 / EN 1928    | class W1  | -                               |
| - maximum tensile force MD/CD      | EN 1297 / EN 12311-1 | 500 / 300 N/50mm                                | 57 / 34 lb/in                   |
| - elongation                       | EN 1297 / EN 12311-1 | 40 / 40 %                                       | -                               |
| Flexibility at low temperatures    | EN 1109              | -20 °C  | -4 °F                           |

 $<sup>^{(1)}</sup>$  For the correlation between laboratory tests and actual conditions, see page 199.

Store the product in a dry, covered location. The rolls must be transported and stored in a vertical position.

### ■ CODES AND DIMENSIONS

| CODE      | description   | tape | Н   | L   | Α       | Н    | L    | Α                  |    |
|-----------|---------------|------|-----|-----|---------|------|------|--------------------|----|
|           |               |      | [m] | [m] | $[m^2]$ | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| BYT1500   | BYTUM 1500    | -    | 1   | 25  | 25      | 3.3  | 82   | 270                | 30 |
| BYTTT1500 | BYTUM 1500 TT | TT   | 1   | 25  | 25      | 3.3  | 82   | 270                | 30 |

# **I BYTUM 2000**



## BITUMINOUS UNDERLAY CONTROL LAYER



















### COMPOSITION





### ■ TECHNICAL DATA

| Properties                         | standard             | value   | USC conversion                  |
|------------------------------------|----------------------|---|---------------------------------|
| Mass per unit area                 | EN 1849-1            | 2000 g/m <sup>2</sup>                           | 6.55 oz/ft <sup>2</sup>         |
| Thickness                          | EN 1849-2            | 1,8 mm  | 71 mil                          |
| Water vapour transmission (Sd)     | EN 1931              | 120 m   | 0.029 US perm                   |
| Maximum tensile force MD/CD        | EN 12311-1           | 600 / 400 N/50mm                                | 69 / 46 lb/in                   |
| Elongation MD/CD                   | EN 12311-1           | 40 / 40 %                                       | -                               |
| Resistance to nail tearing MD/CD   | EN 12310-1           | 220 / 230 N                                     | 49 / 52 lbf                     |
| Watertightness                     | EN 1928              | class W1  | -                               |
| Temperature resistance             | -                    | -40 / 100 °C                                    | -40 / 212 °F                    |
| Reaction to fire                   | EN 13501-1           | class E   | -                               |
| Resistance to penetration of air   | EN 12114             | $0 \text{ m}^3/(\text{m}^2\text{h}50\text{Pa})$ | 0 cfm/ft <sup>2</sup> at 50Pa   |
| Thermal conductivity (λ)           | -                    | 0,2 W/(m·K)                                     | 0.12 BTU/h·ft·°F                |
| Specific heat                      | -                    | 175 J/(kg·K)                                    | -                               |
| Density                            | -                    | approx. 1100 kg/m <sup>3</sup>                  | approx. 0.64 oz/in <sup>3</sup> |
| Water vapour resistance factor (µ) | -                    | approx. 20000                                   | approx. 600 MNs/g               |
| UV stability <sup>(1)</sup>        | EN 13859-1/2         | 3 months  | -                               |
| Exposure to weather <sup>(1)</sup> | -                    | 3 weeks   | -                               |
| After ageing:                      |                      |   |                                 |
| - watertightness                   | EN 1297 / EN 1928    | class W1  | -                               |
| - maximum tensile force MD/CD      | EN 1297 / EN 12311-1 | 500 / 300 N/50mm                                | 57 / 34 lb/in                   |
| - elongation                       | EN 1297 / EN 12311-1 | 40 / 40 %                                       |                                 |
| Flexibility at low temperatures    | EN 1109              | -20 °C  | -4 °F                           |

 $<sup>^{(1)}</sup>$  For the correlation between laboratory tests and actual conditions, see page 199.

Store the product in a dry, covered location. The rolls must be transported and stored in a vertical position.

### ■ CODES AND DIMENSIONS

| CODE    | description | tape | Н   | L   | Α       | Н    | L    | Α                  |    |
|---------|-------------|------|-----|-----|---------|------|------|--------------------|----|
|         |             |      | [m] | [m] | $[m^2]$ | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| BYT2000 | BYTUM 2000  | -    | 1   | 15  | 15      | 3.3  | 50   | 161                | 33 |

## ■ RECOMMENDATIONS FOR INSTALLATION: BYTUM

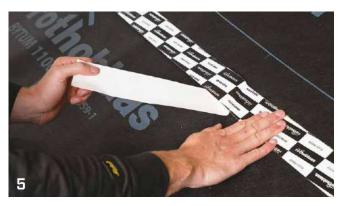
APPLICATION ON ROOF - EXTERNAL SIDE

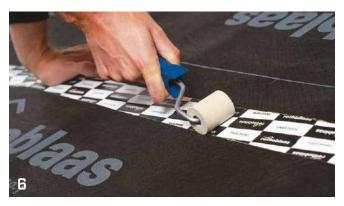












- **1** BYTUM400, BYT750, BYT110, BYT1500, BYT2000
- 2 HAMMER STAPLER 47, HAMMER STAPLER 22, HAND STAPLER, STAPLES
- **5** EASY BAND, SPEEDY BAND, FLEXI BAND, FLEXI BAND UV, SOLID BAND, PLASTER BAND
- 6 ROLLER

# BYTUM BASE 2500



### SELF-ADHESIVE BITUMINOUS MEMBRANE



















### **FLAT ROOF**

Ideal for flat roofs as a final visible layer in combination with BYTUM SLATE 3500.

### WORKABILITY

Flexibility and workability are guaranteed even at low temperatures thanks to the polymer-modified bituminous compound.

### SELF-ADHESIVE AND SELF-SEALING

The adhesive compound and polyester surface finish allow the membrane to be self-sealed quickly and conveniently.

### COMPOSITION

top layer

PL film

compound

elastoplastic polymeric distilled bitumen

reinforcing layer

PL stabilised with fibreglass

compound

elastoplastic polymeric distilled bitumen

bottom layer

distilled bitumen modified with self-adhesive polymer

release liner

removable plastic film

### **CODES AND DIMENSIONS**

| CODE        | description     | liner     | Н   | L   | Α                 | Н    | L    | Α                  |    |
|-------------|-----------------|-----------|-----|-----|-------------------|------|------|--------------------|----|
|             |                 | [mm]      | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| BYTBASE2500 | BYTUM BASE 2500 | 500 / 500 | 1   | 10  | 10                | 3.3  | 33   | 108                | 29 |



### WITHOUT FLAME

Thanks to the modified self-adhesive bitumen compound, the product can be installed without the use of naked flames or heat.

### **EASY INSTALLATION**

Pre-cut removable monosilicone films and a precise alignment of the liners make the work safe, pleasant and aesthetically perfect.

### ■ TECHNICAL DATA

| Properties                                  | standard             | value                          | USC conversion                  |
|---|----------------------|--------------------------------|---------------------------------|
| Mass per unit area                          | EN 1849-1            | approx. 2550 g/m <sup>2</sup>  | approx. 8.36 oz/ft <sup>2</sup> |
| Thickness                                   | EN 1849-1            | 2 mm                           | 79 mil                          |
| Water vapour transmission (Sd)              | EN 1931              | approx. 200 m                  | approx. 0.017 US perm           |
| Maximum tensile force MD/CD                 | EN 12311-1           | 400 / 300 N/50mm               | 46 / 34 lb/in                   |
| Elongation MD/CD                            | EN 12311-1           | 35 / 35 %                      | -                               |
| Resistance to nail tearing MD/CD            | EN 12310-1           | 120 / 120 N                    | 27 / 27 lbf                     |
| Watertightness                              | EN 1928              | 60 kPa                         | -                               |
| Temperature resistance                      | -                    | -40 / 100 °C                   | -40 / 212 °F                    |
| Reaction to fire                            | EN 13501-1           | class E                        | -                               |
| Thermal conductivity (λ)                    | -                    | 0,17 W/(m·K)                   | 0.12 BTU/h·ft·°F                |
| Specific heat                               | -                    | 170 J/(kg·K)                   | -                               |
| Density                                     | -                    | approx. 1250 kg/m <sup>3</sup> | approx. 0.72 oz/in <sup>3</sup> |
| Water vapour resistance factor (μ)          | -                    | approx. 100000                 | approx. 1000 MNs/g              |
| Joint strength                              | EN 12317-2           | 300 / 200 N/50mm               | 34 / 23 lb/in                   |
| Joint detachment resistance                 | EN 12316-1           | -                              | -                               |
| UV stability <sup>(1)</sup>                 | EN 13859-1/2         | 3 months                       | -                               |
| Exposure to weather <sup>(1)</sup>          | -                    | 3 weeks                        | -                               |
| After ageing:                               |                      |                                |                                 |
| - watertightness                            | EN 1297 / EN 1928    | class W1                       |                                 |
| - maximum tensile force MD/CD               | EN 1297 / EN 12311-1 | 300 / 200 N/50mm               | 34 / 23 lb/in                   |
| - elongation                                | EN 1297 / EN 12311-1 | 35 / 35 %                      | -                               |
| Flexibility at low temperatures             | EN 1109              | -20 °C                         | -4 °F                           |
| Hot sliding                                 | EN 1110              | 100 °C                         | 212 °F                          |
| Application temperature                     | -                    | 10 / 30 °C                     | 50 / 86 °F                      |
| Adhesion strength on proper support at 180° | EN 12316-1           | 50 N                           | 11.24 lbf                       |
| Adhesion strength on steel                  | ASTM D 1000          | 50 N/50mm                      | 6 lb/in                         |

 $<sup>^{(1)}</sup>$  For the correlation between laboratory tests and actual conditions, see page 199.

Store the product in a dry, covered location. The rolls must be transported and stored in a vertical position.

It is recommended to store the product at room temperature until application, as it is sensitive to temperature changes. We recommend applying it during the cooler hours in summer and the warmer hours in winter, possibly with the help of a hot air gun.

### RELATED PRODUCTS



BYTUM LIQUID page 42



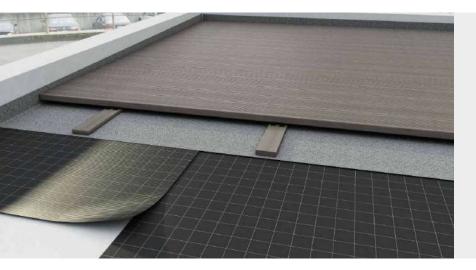
BYTUM SPRAY page 46



**GROUND BAND** page 34



BLACK BAND page 136



### **LOW PITCHES**

Used on slopes of up to 5° as an under-tile, it guarantees excellent waterproofing even in the event of punching.

# BYTUM SLATE 3500





















### **EASY INSTALLATION**

The slate finish makes BYTUM SLATE 3500 usable on slopes up to 5° as an under-tile and compatible with mortar and foam.

### **WIDE RANGE**

Available in 4 colours to meet different application areas and aesthetic requirements.

### **FLEXIBILITY**

Flexibility and workability are guaranteed even at low temperatures thanks to the polymer-modified bituminous compound.



### CODES AND DIMENSIONS

| CODE        | description            | liner     | colour | Н   | L   | Α                 | Н    | L    | А                  |    |
|-------------|------------------------|-----------|--------|-----|-----|-------------------|------|------|--------------------|----|
|             |                        | [mm]      |        | [m] | [m] | [m <sup>2</sup> ] | [ft] | [ft] | [ft <sup>2</sup> ] |    |
| BYTSWHI3500 | BYTUM SLATE 3500 WHITE | 500 / 500 | white  | 1   | 10  | 10                | 3.29 | 33   | 107.64             | 20 |
| BYTSGRE3500 | BYTUM SLATE 3500 GREEN | 500 / 500 | green  | 1   | 10  | 10                | 3.29 | 33   | 107.64             | 20 |
| BYTSRED3500 | BYTUM SLATE 3500 RED   | 500 / 500 | red    | 1   | 10  | 10                | 3.29 | 33   | 107.64             | 20 |
| BYTSGRA3500 | BYTUM SLATE 3500 GRAY  | 500 / 500 | grey   | 1   | 10  | 10                | 3.29 | 33   | 107.64             | 20 |



### SELF-ADHESIVE AND SELF-SEALING

The lateral adhesive strip guarantees waterproofing even at the points where membranes overlap.

### FLAT ROOF

Ideal for creating a flat roof as a final visible layer in combination with BYTUM BASE 2500.

### COMPOSITION

top layer

slate chips

compound

elastoplastic polymeric distilled bitumen

reinforcing layer

PL stabilised with fibreglass

compound

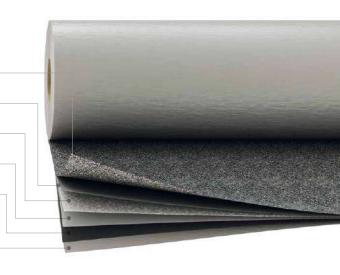
elastoplastic polymeric distilled bitumen

bottom layer

distilled bitumen modified with self-adhesive polymer

release liner

removable plastic film



### ■ TECHNICAL DATA

| Properties                            | standard             | value                          | USC conversion           |
|---------------------------------------|----------------------|--------------------------------|--------------------------|
| Mass per unit area                    | EN 1849-1            | 3500 g/m <sup>2</sup>          | 11.47 oz/ft <sup>2</sup> |
| Thickness                             | EN 1849-1            | ca. 2.8 mm                     | approx. 110 mil          |
| Water vapour transmission (Sd)        | EN 1931              | 280 m                          | 0.012 US perm            |
| Maximum tensile force MD/CD           | EN 12311-1           | 400 / 300 N/50mm               | 46 / 34 lb/in            |
| Elongation MD/CD                      | EN 12311-1           | 35 / 35 %                      | -                        |
| Resistance to nail tearing MD/CD      | EN 12310-1           | 120 / 120 N                    | 27 / 27 lbf              |
| Watertightness                        | EN 1928              | 60 kPa                         | -                        |
| Temperature resistance                | -                    | -40 / 100 °C                   | -40 / 212 °F             |
| Reaction to fire                      | EN 13501-1           | class E                        | -                        |
| Thermal conductivity (λ)              | -                    | 0,17 W/(m·K)                   | 0.12 BTU/h·ft·°F         |
| Specific heat                         | -                    | 170 J/(kg·K)                   |                          |
| Density                               | -                    | approx. 1250 kg/m <sup>3</sup> | approx. 0.72 oz/in3      |
| Water vapour resistance factor (μ)    | -                    | approx. 100000                 | approx. 1400 MNs/g       |
| Joint strength                        | EN 12317-2           | 300 / 200 N/50mm               | 34 / 23 lb/in            |
| UV stability <sup>(1)</sup>           | EN 13859-1/2         | permanent                      | -                        |
| After ageing:                         |                      |                                |                          |
| - watertightness                      | EN 1297 / EN 1928    | class W1                       | -                        |
| - maximum tensile force MD/CD         | EN 1297 / EN 12311-1 | 300 / 200 N/50mm               | 34 / 23 lb/in            |
| - elongation                          | EN 1297 / EN 12311-1 | 35 / 35 %                      | -                        |
| Flexibility at low temperatures       | EN 1109              | -15 °C                         | 5 °F                     |
| Hot sliding                           | EN 1110              | 100 °C                         | 212 °F                   |
| Application temperature               | -                    | 10 °C                          | 50 °F                    |
| Adhesion strength on selvedge at 180° | EN 12316-1           | 50 N                           | 11.240451 lbf            |
| Adhesion strength on steel            | ASTM D 1000          | 50 N/50mm                      | 6 lb/in                  |

<sup>(1)</sup> For the correlation between laboratory tests and actual conditions, see page 199.

Store the product in a dry, covered location. The rolls must be transported and stored in a vertical position.

It is recommended to store the product at room temperature until application, as it is sensitive to temperature changes. We recommend applying it during the cooler hours in summer and the warmer hours in winter, possibly with the help of a hot air gun.



### PERMANENT UV STABILITY

The exposed slated top layer provides long-lasting weather resistance by protecting the bitumen waterproofing layer.

# **■ RECOMMENDATIONS FOR INSTALLATION**

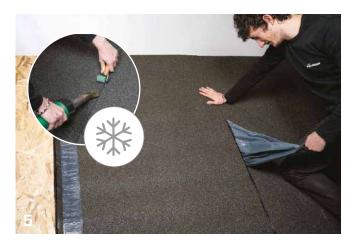
BYTUM SLATE 3500







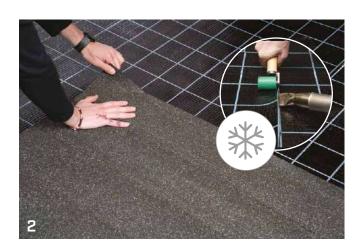






BYTUM BASE 2500 | BYTUM SLATE 3500





# **I** RECOMMENDATIONS FOR INSTALLATION

### INTERNAL CORNER









- 3 MARLIN, CUTTER
- 4 ROLLER

### EXTERNAL CORNER









# SHINGLE

### **BITUMINOUS TILE**





### **CE MARKING**

Final waterproof covering layer CE marked according to ETA. Weatherproof and acoustically insulated against heavy rain.

### PERMANENT UV STABILITY

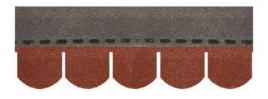
Unlimited UV resistance thanks to the basalt grit top layer.

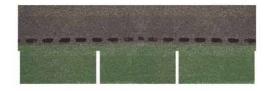
### **SELF-SEALING**

Easy to install thanks to pre-installed thermo-adhesive dots that ensure sealing during installation.









### CODES AND DIMENSIONS

| CODE    |   | В    | L    | В     | L     | colour | A/co.             | co. / b | A / b             |    |
|---------|---|------|------|-------|-------|--------|-------------------|---------|-------------------|----|
|         |   | [mm] | [mm] | [in]  | [in]  |        | [m <sup>2</sup> ] |         | [m <sup>2</sup> ] |    |
| SHIREDR | R | 777  | 336  | 30.6  | 13.23 | red    | 2,0               | 39      | 66,0              | 18 |
| SHIBROR | R | 777  | 336  | 30.6  | 13.23 | brown  | 2,0               | 39      | 66,0              | 18 |
| SHIGRER | R | 777  | 336  | 30.6  | 13.23 | green  | 2,0               | 39      | 66,0              | 18 |
| SHIBLAR | R | 777  | 336  | 30.6  | 13.23 | black  | 2,0               | 39      | 66,0              | 18 |
| SHIREDB | В | 808  | 336  | 31.82 | 13.23 | red    | 2,0               | 39      | 66,0              | 18 |
| SHIBROB | В | 808  | 336  | 31.82 | 13.23 | brown  | 2,0               | 39      | 66,0              | 18 |
| SHIGREB | В | 808  | 336  | 31.82 | 13.23 | green  | 2,0               | 39      | 66,0              | 18 |
| SHIBLAB | В | 808  | 336  | 31.82 | 13.23 | black  | 2,0               | 39      | 66,0              | 18 |

**B** tile width

 ${\bf L}\,$  tile height A / co. area of tiles per package A / b area of tiles per pallet

co./b packages per pallet

**R** rectangular

**B** biber



### **TRANSPORTATION**

Easy to transport thanks to the small size of the package (80 cm x 34 cm) and the low weight of the package (approx. 20 kg).

### **BYTUM 400**

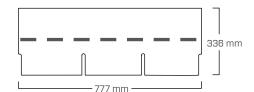
Ideal in combination with a bituminous under-tile shield (BYTUM 400) for effective waterproofing even on low roof slopes.

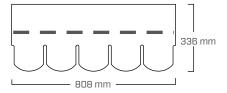
### ■ TECHNICAL DATA

| Properties                          | standard    | value                 | USC conversion              |
|-------------------------------------|-------------|-----------------------|-----------------------------|
| Mass per unit area (RECTANGULAR)    | ETA 07/0266 | 9,6 kg/m <sup>2</sup> | 0.03 oz/ft <sup>2</sup>     |
| Mass per unit area (BIBER)          | ETA 07/0266 | 9 kg/m <sup>2</sup>   | 0.029 oz/ft <sup>2</sup>    |
| Thickness                           | -           | 3 mm                  | 118 mil                     |
| Maximum tensile force MD/CD         | EN 544      | > 600 / 400 N/50mm    | > 69 / 46 lb/in             |
| Elongation MD/CD                    | EN 544      | 3,5 / 3,5 %           |                             |
| Resistance to nail tearing MD/CD    | EN 544      | > 100 N               | > 22 lbf                    |
| Water impermeability (bitumen mass) | ETA-07/0266 | 896 g/m <sup>2</sup>  | 2.936242 oz/ft <sup>2</sup> |
| Temperature resistance              |             | -20 / 80 °C           | -4 / 176 °F                 |
| Reaction to fire                    | EN 13501-1  | class E               |                             |
| External fire performance           | EN 13501-5  | BROOF class (t1)      |                             |
| After artificial ageing             |             |                       |                             |
| - maximum tensile force MD/CD       | EN 544      | > 600 / 400 N/50mm    | 69 / 46 lb/in               |
| - resistance to nail tearing MD/CD  | EN 544      | > 100 N               | 22 lbf                      |
| - hot slipping                      | EN 544      | < 2 mm                | < 0.07874 in                |
| - grit adhesion                     | EN 544      | < 2,5 g               | < 0.088185 oz               |
| Flexibility at low temperatures     | EN 1109     | -20 °C                | -4 °F                       |
| Bitumen density                     | ETA-07/0266 | 1,2 kg/L              |                             |
| Application temperature             | ETA-07/0266 | 0 / 40 °C             | 32 / 104 °F                 |
| Water absorption                    | EN 544      | 2 %                   |                             |
| UV stability                        | -           | permanent             | -                           |

It is recommended to store the product at room temperature until application, as it is sensitive to temperature changes. We recommend applying it during the cooler hours in summer and the warmer hours in winter, possibly with the help of a hot air gun.

### GEOMETRY





### ■ RELATED PRODUCTS

### SHINGLE STICK

| CODES    | mL  | pcs |
|----------|-----|-----|
| 00057008 | 310 | 12  |

Yield of 1 cartridge equal to about 3 linear metres for metal sheet work.



### PERGOLAS AND PORCHES

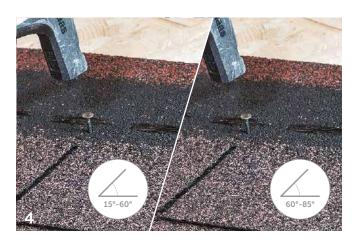
Ideal solution for roofing small structures such as canopies, pergolas or porches.

## ■ RECOMMENDATIONS FOR INSTALLATION











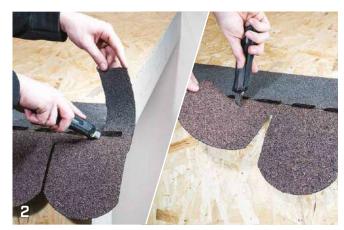






## ■ RECOMMENDATIONS FOR INSTALLATION

















# I TOOLS

| CAP SUPER ROOFING SYSTEM FOR CONSTRUCTION SITES    |
|--|
| CAP TOP TARPAULIN FOR ROOFS                        |
| LIZARD<br>UNWINDER FOR NAIL POINT                  |
| SEALING TAPE325 ROLLER                             |
| ROLL FOR BELTS                                     |
| SPEEDY ROLL SPEEDY BAND UNWINDER WITH LONG HANDLE  |
| WINGBAG INFLATABLE AIR CUSHION WITH HAND PUMP MADE |
| OF FIBRE-REINFORCED SYNTHETIC MATERIAL             |
| BRUSH BRUSHES AND ROLLERS327                       |
| NITRAN   |
| NYLON-ELASTAN/NITRILE FOAM GLOVES                  |
| GLASS 1 GLASSES WITH TEMPLES                       |
| MARLIN CUTTER ALLROUND                             |
| CUTTER FOR PROFESSIONAL CUTTING                    |
| LAMA KNIFE FOR INSULATION MATERIAL                 |
| KOMPRI CLAMP  EXPANDING TAPE STAPLE                |
| HAMMER STAPLER 47                                  |
| HAMMER STAPLER330 HAMMER STAPLER 22                |
| HAMMER STAPLER                                     |
| HAND STAPLER  MANUAL STAPLER                       |
| STAPLES CHISEL TIP                                 |
| FLY SOFT SEALANT GUN FOR 600 mL SOFT CARTRIDGES    |
| FLY PROFESSIONAL GUN FOR 310 mL CARTRIDGES332      |
| FLY FOAM AUTOMATIC LONG TUBE GUN FOR FOAMS         |
| FOAM CLEANER                                       |
| DETERGENT FOR CARTRIDGE GUNS                       |

# **CAP SUPER**

# VIDEO

### ROOFING SYSTEM FOR CONSTRUCTION SITES

- With this solution you can reduce or increase the size of the roofing system to adapt it to the floors
- Thanks to the reinforced metal eyelets on the edge and underside, the tarpaulin can be fixed every metre on the roof
- The large mass per unit area and the type of material guarantee better mechanical resistance and durability over time

### CODES AND DIMENSIONS

|   | CODE        | description                    | pcs |
|---|-------------|--------------------------------|-----|
| 1 | CAPSUPER88  | tarpaulin for roof 8 x 8 m     | 1   |
| 2 | CAPSUPER48  | 1/2 tarpaulin for roof 8 x 4 m | 1   |
| 3 | CAPSUPERCOL | sealing element                | 1   |
| 4 | CAPSUPERPAD | inflatable element             | 1   |
| 5 | CAPSUPERPIL | element for columns            | 1   |

### ■ COMPLEMENTARY PRODUCTS

| CODE      | description                      | pcs |
|-----------|----------------------------------|-----|
| 6 CAPPUMP | adapter for pneumatic compressor | 1   |
| 7 CAPLOOP | fastening carabiner              | 25  |
| 8 CAPGLUE | 50 mL repair adhesive            | 1   |



the video on our YouTube channel





### **MATERIAL**

Sturdy, slightly transparent polyester fabric for immediate identification of openings and elements under the tarpaulin.

### **PROTECTION**

Durable protection against moisture and dust penetration in the event of delays and work stoppages, or if the floor remains uncovered for extended periods.



### ■ TECHNICAL DATA

| Properties  | standard                | values                       |
|---|-------------------------|------------------------------|
| Mass per unit area                                | ISO 2286-2              | 670 g/m <sup>2</sup>         |
| Thickness   | ISO 2286-3              | 0,5 mm                       |
| Tensile strength<br>(transverse and longitudinal) | EN ISO 1421             | 3000 / 3000 N/50 mm          |
| Tear resistance (transverse and longitudinal)     | DIN 53363               | 300 / 300 N                  |
| Cold resistance                                   | EN 1876-1<br>ASTM D2136 | -30°C                        |
| Temperature resistance                            | IVK/Pkt.5               | +70°C                        |
| UV colour resistance                              | ISO 107-B02             | 7/8 (on a scale from 1 to 8) |
| Bending strength                                  | DIN 53359 shape A       | 100,000 x - no cracks        |



## COLUMNS

Thanks to the adjustable element for columns, it is also possible to hermetically seal chimney or pillar crossing points.

# I CAP TOP

### TARPAULIN FOR ROOFS

- Each size is equipped with a reinforced lifting hook for easier installation
- Thanks to metal eyelets, the tarpaulin can be fixed every metre on the roof
- The large mass per unit area and the type of material guarantee better mechanical resistance and durability over time
- When fixing the tarpaulin to the roof it is important that all eyelets are always anchored so that the wind load is spread over as many eyelets as possible



### **■ CODES AND DIMENSIONS**

| CODE       | <b>sizes</b><br>[m] | <b>weight</b><br>[kg] | pcs |
|------------|---------------------|-----------------------|-----|
| CAPTOP1012 | 10 x 12             | 72,0                  | 1   |
| CAPTOP1214 | 12 x 14             | 100,8                 | 1   |
| CAPTOP1416 | 14 x 16             | 134,4                 | 1   |

Other sizes and/or personalised sheets can be supplied on request.

### ■ TECHNICAL DATA

| Properties                                     | standard    | values                       |
|--|-------------|------------------------------|
| Mass per unit area                             | ISO 2286-2  | 600 g/m <sup>2</sup>         |
| Thickness                                      | ISO 2286-3  | 0,5 mm                       |
| Tensile strength (transverse and longitudinal) | ISO 1421-1  | 2200 / 2000 N/50 mm          |
| Tear resistance (transverse and longitudinal)  | ISO 1421-1  | 280 / 250 N/50 mm            |
| UV colour<br>resistance                        | ISO 105 B02 | 7/8 (on a scale from 1 to 8) |
| Eyelet tear resistance                         | -           | 100 kg                       |



### **MATERIAL**

Truck tarpaulin in polyester covered in matt lacquered PVC.

### **PROTECTION**

During construction, it offers temporary protection against rain and avoids infiltration of dust and construction remains into the cracks between the panels.

## **LIZARD**

# VIDEO

# UNWINDER FOR NAIL POINT SEALING TAPE

#### TIME SAVING

Thanks to the fast and precise application of the nail tip tape, application costs can be considerably reduced.

#### WATERPROOF

The correct application of the nail point tape guarantees the membrane impermeability in case of perforation by means of fastening.



#### ■ CODES AND DIMENSIONS

| CODE   | description | pcs |
|--------|-------------|-----|
| LIZARD | unwinder    | 1   |



#### VIDEO

Scan the QR Code and watch the video on our YouTube channel





#### RECOMMENDED PRODUCT

Optimal with NAIL PLASTER single-sided nail point tape.

#### FIELDS OF USE

For nail point tape from 50 to 80 mm wide and timbers from  $40 \times 40$  mm to  $80 \times 80$  mm.

## ROLLER

#### **ROLL FOR BELTS**



#### CODES AND DIMENSIONS

|   | CODE  | description     | size | pcs |
|---|-------|-----------------|------|-----|
|   |       |                 | [mm] |     |
| 1 | RLL40 | silicone roller | 40   | 1   |
| 2 | RLL45 | PUR roll        | 45   | 1   |



# SPEEDY ROLL

# SPEEDY BAND UNWINDER WITH LONG HANDLE

#### CODES AND DIMENSIONS

| CODE       | description          | length    | pcs |
|------------|----------------------|-----------|-----|
|            |                      | [cm]      |     |
| SPEEDYROLL | SPEEDY BAND unwinder | 120 - 200 | 1   |

#### OPTIONAL ITEMS

| CODE     | В    | L   | pcs |
|----------|------|-----|-----|
|          | [mm] | [m] |     |
| SPEEDY60 | 60   | 25  | 10  |



# **WINGBAG**

INFLATABLE AIR CUSHION WITH HAND PUMP MADE OF FIBRE-REINFORCED SYNTHETIC MATERIAL



| CODE   | pcs |
|--------|-----|
| WINBAG | 4   |



# BRUSH

#### **BRUSHES AND ROLLERS**



| CC   | DE   | sizes     | pcs |
|------|------|-----------|-----|
|      |      | [mm]      |     |
| 1 BR | S560 | 5 x 60    | 1   |
| 2 BR | S414 | 40 x 140  | 1   |
| 3 BR | S625 | Ø60 x 250 | 1   |



# **I** NITRAN

#### NYLON-ELASTAN/NITRILE FOAM GLOVES



#### CODES AND DIMENSIONS

| CODE  | size | pcs |
|-------|------|-----|
| NIT8  | 8    | 1   |
| NIT9  | 9    | 1   |
| NIT10 | 10   | 1   |



# GLASS 1

#### **GLASSES WITH TEMPLES**



| CODE   | description     | pcs |
|--------|-----------------|-----|
| GLASS1 | side protection | 1   |



# **MARLIN**

#### **CUTTER ALLROUND**

- Provided with triple-sharpened blades
- Extremely robust 100% rust proof spare blade compartment not





■ CODES AND DIMENSIONS

| CODE   | description  | pcs |
|--------|--------------|-----|
| MARLIN | cutter       | 1   |
| MARBLA | spare blades | 10  |



# **CUTTER**

#### FOR PROFESSIONAL CUTTING

- The safety lever allows the blade to be changed quickly and easily
- Thanks to the soft support, it is even easier to use the thumb to generate maximum pressure



|   | CODE   | description   | pcs |
|---|--------|---|-----|
| 1 | CUTTER | cutter with 5 spare blades  | 1   |
|   | CUT60  | spare trapezoidal blade   | 10  |
| 2 | CUTSET | cutter in a practical nylon case with:<br>10 pcs. trapezoidal blades<br>5 pcs. hook blades<br>2 pcs. linoleum blades<br>2 pcs. precision cut blades | 1   |



# LAMA

#### KNIFE FOR INSULATION MATERIAL

- It can be used on both sides, 2 mm thick stainless steel blade
- Ergonomic handle shape for optimal processing of insulation material



#### ■ CODES AND DIMENSIONS

| CODE | blade length | weight | pcs |
|------|--------------|--------|-----|
|      | [mm]         | [g]    |     |
| LAMA | 280          | 175    | 1   |



# **KOMPRI CLAMP**

#### **EXPANDING TAPE STAPLE**



| CODE         | opening dimensions |   |
|--------------|--------------------|---|
|              | [mm]               |   |
| KOMPRICLAMPS | 0-30               | 5 |
| KOMPRICLAMPL | 40-95              | 5 |
| KOMPRICLAMPL | 40-95              | 5 |



# **HAMMER STAPLER 47**

#### HAMMER STAPLER

Weight: 0,87 kgBack width: 10,6 mm



#### ■ CODES AND DIMENSIONS

| CODE     | pcs |
|----------|-----|
| HH735347 | 1   |



# **HAMMER STAPLER 22**

#### HAMMER STAPLER

Weight: 1,04 kgBack width: 10,6 mm



| CODE     | pcs |
|----------|-----|
| HH735322 | 1   |



# I HAND STAPLER

#### MANUAL STAPLER

Weight: **0,6 kg**Back width: **10,6 mm** 



#### ■ CODES AND DIMENSIONS

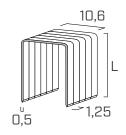
| CODE    | pcs |
|---------|-----|
| RTHH14B | 1   |



# **STAPLES**

#### **CHISEL TIP**

• Wire 0,5 mm







| CODE       | L    | cladding    | со       | mpatible machi | ine     | pcs  | kg  | pcs/    |
|------------|------|-------------|----------|----------------|---------|------|-----|---------|
|            | [mm] |             | HH735347 | HH735322       | RTHH14B |      |     |         |
| HH10005121 | 6    | zinc plated | •        |                | •       | 5000 | 0,5 | 6000000 |
| HH10005122 | 8    | zinc plated | •        | •              | •       | 5000 | 0,6 | 6000000 |
| HH10005123 | 10   | zinc plated | •        | •              | •       | 5000 | 0,7 | 6000000 |
| HH10005124 | 12   | zinc plated |          | •              | •       | 5000 | 0,7 | 6000000 |
| HH10005125 | 14   | zinc plated |          | •              | •       | 5000 | 0,8 | 6000000 |

## | FLY SOFT

# SEALANT GUN FOR 600 mL SOFT CARTRIDGES

• For all soft cartridges up to 600 mL, robust body





#### ■ CODES AND DIMENSIONS

| CODE     | description  | pcs |
|----------|--|-----|
| FLYSOFT  | for 600 mL soft cartridges                                     | 1   |
| FLYSOFT2 | 5 spare plungers, 1 nozzle, 1 angled nozzle,<br>1 grout nozzle | 1   |
| FLYSOFT3 | spare plungers   | 5   |



## **I** FLY

#### PROFESSIONAL GUN FOR 310 mL CARTRIDGES

• High stability gun for standard 310 mL cartridges





| CODE | description              | pcs |
|------|--------------------------|-----|
| FLY  | for cartridges of 310 mL | 1   |



## **FLY FOAM**

#### AUTOMATIC LONG TUBE GUN FOR FOAMS

- For all common bayonet lock foam cartridges
- With screw for flow regulation





#### CODES AND DIMENSIONS

| CODE    | description | pcs |
|---------|-------------|-----|
| FLYFOAM | foam gun    | 1   |



# I FOAM CLEANER

#### DETERGENT FOR CARTRIDGE GUNS

• It allows the internal cleaning of cartridge guns, preventing foam residues from impairing their operation



#### ■ CODES AND DIMENSIONS

| CODE     | content | pcs |
|----------|---------|-----|
|          | [mL]    |     |
| FLYCLEAN | 500     | 12  |

Aerosol 1. Eye Irrit. 2. STOT SE 3.





# I PRODUCTS LIST

| CODE                         | description   | page |
|------------------------------|---|------|
| ALPHA                        | preshaped profile for sealing corners   | 143  |
| ALU BAND                     | reflective single-sided adhesive tape for indoor use                            | 61   |
| ALU BUTYL BAND               | reflecting butyl adhesive tape  | 134  |
| ALU FLASH CONNECT            | aluminium and self-adhesive butyl version                                       | 178  |
| BARRIER ALU FIRE A2 SD2500   | reflective air vapour barrier fire reaction class A2-s1,d0                      | 216  |
| BARRIER ALU NET SD150        | reflective vapour barrier Sd 150 m  | 213  |
| BARRIER ALU NET SD1500       | reflective vapour barrier Sd > 1500 m   | 214  |
| BARRIER NET ADHESIVE 200     | self-adhesive vapour barrier screen with reinforcement grid                     | 210  |
| BARRIER NET SD40             | vapour barrier Sd 40 m  | 206  |
| BARRIER SD150                | vapour barrier Sd > 145 m   | 208  |
| BIRD COMB                    | standard eaves bird comb  | 188  |
| BIRD COMB EVO                | twin row eaves bird comb  | 189  |
| BIRD SPIKE                   | rigid bird spikes   | 187  |
| BLACK BAND                   | universal single-sided butyl tape   | 136  |
| BRUSH                        | brushes and rollers   | 327  |
| BRUSH VENT                   | rigid under-ridge with side brushes   | 171  |
| BUTYL BAND                   | double-sided universal butyl tape   | 129  |
| BYTUM 1100                   | bituminous underlay control layer   | 304  |
| BYTUM 1500                   | bituminous underlay control layer   | 305  |
| BYTUM 2000                   | bituminous underlay control layer   | 306  |
| BYTUM 400                    | bituminous underlay control layer   | 302  |
| BYTUM 750                    | bituminous underlay control layer   | 303  |
| BYTUM BAND                   | self-adhesive bituminous band, can be plastered                                 | 42   |
| BYTUM BASE 2500              | self-adhesive bituminous membrane   | 308  |
| BYTUM LIQUID   REINFORCEMENT |   | 48   |
| BYTUM SLATE 3500             | self-adhesive slated bituminous membrane  | 310  |
| BYTUM SPRAY                  | bituminous membrane sealant spray   | 46   |
| CAP SUPER                    | roofing system for construction sites   | 322  |
| CAPTOP                       | tarpaulin for roofs   | 324  |
| CLIMA CONTROL 80             | membrane with variable vapour diffusion   | 228  |
| CLIMA CONTROL NET 145        | membrane with variable vapour diffusion and reinforcement grid                  | 230  |
| CLIMA CONTROL NET 149        | membrane with variable vapour diffusion and reinforcement grid                  | 232  |
| CONNECT BAND                 | sealing wall barrier for irregular substrates                                   | 32   |
| CONSTRUCTION SEALING         | compressible sealing gasket for regular joints                                  | 52   |
| CUTTER                       |   | 328  |
| DGZ                          | for professional cutting  | 144  |
| - ·                          | double threaded screw for insulation  |      |
| DOUBLE BAND                  | universal double-sided tape   | 62   |
| EASY BAND                    | universal single-sided tape   | 68   |
| EASY FOAM                    | general purpose foam sealant  | 115  |
| ECO GLUE                     | adhesive glue for sealing membranes on biological basis                         | 149  |
| EXPAND BAND                  | self-expanding sealing tape   | 108  |
| FACADE BAND UV               | universal single-sided tape, resistant to UV rays                               | 76   |
| FIRE FOAM                    | high fire-resistant sealing foam  | 118  |
| FIRE SEALING ACRYLIC         | high fire-resistant acrylic sealant   | 122  |
| FIRE SEALING SILICONE        | high fire-resistant silicone sealant  | 124  |
| FIRE STRIPE                  | intumescent thermo-inflatable flexible gasket                                   | 130  |
| FLEXI BAND                   | universal single-sided high-adhesive tape                                       | 72   |
| FLEXI BAND UV                | universal single-sided adhesive tape with high UV stability and heat resistance | 74   |
| FLUID MEMBRANE               | synthetic sealing membrane for brush and spray application                      | 50   |
| FLY                          | professional gun for 310 mL cartridges  | 332  |
| FLY FOAM                     | automatic long tube gun for foams   | 333  |
| FLY SOFT                     | sealant gun for 600 mL soft cartridges  | 332  |
| FOAM CLEANER                 | detergent for cartridge guns  | 333  |
| FRAME BAND                   | self-expanding sealing tape for windows/doors                                   | 112  |
| FRONT BAND UV 210            | universal single-sided tape, highly resistant to UV rays                        | 98   |
| GASKET                       | gasket for valley   | 180  |
| GLASS 1                      | glasses with temples  | 327  |
| GROUND BAND                  | self-adhesive bituminous membrane   | 34   |
| GUTTER                       | flashing  | 179  |
| HAMMER STAPLER 22            | hammer stapler  | 330  |
| HAMMER STAPLER 47            | hammer stapler  | 330  |
| HAND STAPLER                 | manual stapler  | 331  |
| HERMETIC FOAM                | high performing soundproofing sealing foam                                      | 116  |
| SULFIX                       | anchor for fastening insulation to brickwork                                    | 145  |
| KOMPRI CLAMP                 | expanding tape staple   | 329  |
| LAMA                         | knife for insulation material   | 329  |
| LEVEL BAND                   | sealing wall barrier for foundations  | 33   |
| LITE BAND                    | acrylic single-sided adhesive tape  | 144  |
| LIZARD                       | unwinder for nail point sealing tape  | 325  |
| MANICA FLEX                  | sealing sleeve for conduit and cable passage                                    | 140  |
|                              |   |      |
| MANICA DI ASTED              | lead profile with EPDM sleeve   | 142  |
| MANICA POST                  | adhesive sealing sleeve that can be plastered                                   | 138  |
| MANICA POST                  | adhesive sealing sleeve for outdoors  | 142  |
| MANICA ROLL                  | self-adhesive lead and butyl version  | 178  |
| MARLIN                       | cutter allround   | 328  |
| MEMBRANE GLUE                | adhesive glue for sealing membranes   | 148  |
| METAL ROLL                   | flexible ventilated aluminium under-ridge                                       | 170  |
| MS SEAL                      | MS polymer high elasticity sealant  | 120  |

| CODE                              | description   | page       |
|-----------------------------------|---|------------|
| NAIL BAND                         | butyl nail point sealant tape   | 128        |
| NAIL PLASTER   GEMINI             | high-adhesion nail point sealant tape   | 126        |
| NET ROLL                          | flexible ventilated under-ridge   | 168        |
| NITRAN                            | nylon-elastan/nitrile foam gloves   | 327        |
| OUTSIDE GLUE                      | high elasticity universal adhesive glue for external use  | 154        |
| PEAK EASY                         | ventilated rigid ridge roll   | 174        |
| PEAK HOOK                         | ridge fastening hook for flat and shaped tiles  | 175        |
| PEAK ONE                          | ventilated under-ridge for single pitch   | 173        |
| PEAK VENT AISI 430                | rigid under-ridge kit   | 172        |
| PLASTER BAND<br>PLASTER BAND LITE | special high-adhesion tape, can be also plastered   | 84         |
| PRIMER                            | tape with adhesive mounting strip, can be plastered universal primer for acrylic adhesive tapes | 92         |
| PRIMER SPRAY                      | universal spray primer for acrylic adhesive tapes   | 103<br>102 |
| PROTECT                           | self-adhesive butyl band, can be plastered  | 102        |
| RADON FLOOR                       | waterproofing radon gas barrier for foundations   | 38         |
| RAIN TUBE                         | temporary downpipe for construction site phases   | 191        |
| ROLLER                            | roll for belts  | 326        |
| SEAL BAND   SEAL SQUARE           | single-sided tape for indoor use  | 64         |
| SHINGLE                           | bituminous tile   | 314        |
| SMART BAND                        | universal single-sided tape with separable liner  | 80         |
| SNOW STOP                         | snow stopper hook for ridge tiles and tiles   | 181        |
| SOFT FLASH CONNECT                | EPDM and butyl self-adhesive version  | 178        |
| SOLID BAND                        | robust single-sided adhesive tape suitable for low temperatures                                 | 78         |
| SPEEDY BAND                       | universal single-sided tape without release liner   | 70         |
| SPEEDY ROLL                       | SPEEDY BAND unwinder with long handle   | 326        |
| STANDARD ROLL                     | flexible ventilated under-ridge   | 169        |
| STAPLES                           | chisel tip  | 331        |
| START BAND                        | waterproofing profile with high mechanical resistance   | 30         |
| SUPERB GLUE                       | high elasticity adhesive glue for sealing membranes   | 150        |
| SUPPORT BATTEN                    | metal batten-holders  | 176        |
| SUPRA BAND                        | universal double-sided butyl tape with high adhesiveness  | 132        |
| TERMI FLOOR                       | waterproofing anti-termite barrier for foundations  | 40         |
| TERRA BAND UV                     | butyl adhesive tape   | 100        |
| THERMOWASHER                      | washer to fasten insulation to timber   | 145        |
| TIE-BEAM STRIPE                   | tie beam sealing profile  | 54         |
| TILE STOP L                       | L pre-shaped hooks for plain tiles  | 183        |
| TILE STOP S                       | S pre-shaped hooks for plain tiles  | 182        |
| TILE STOP WIND                    | pre-shaped bracing hooks for tiles  | 184        |
| TILE STOP WIND COPPO              | pre-shaped bracing hooks for ridge tiles  | 185        |
| TRASPIR 110                       | highly breathable membrane  | 253        |
| TRASPIR 135                       | highly breathable membrane  | 257        |
| TRASPIR 150                       | highly breathable membrane  | 260        |
| TRASPIR 200<br>TRASPIR 95         | highly breathable membrane highly breathable membrane for walls                                 | 264        |
| TRASPIR 45                        | 3 7   | 252        |
| TRASPIR ALU 120                   | highly breathable self-adhesive membrane highly breathable membrane                             | 276        |
| TRASPIR ALU 200                   | reflective highly breathable membrane   | 256<br>265 |
| TRASPIR ALU FIRE A2 430           | reflective highly breathable membrane   |            |
| TRASPIR DOUBLE EVO 340            | monolithic and microporous breathable membrane  | 292<br>284 |
| TRASPIR DOUBLE NET 270            | highly breathable membrane  | 280        |
| TRASPIR EVO 160                   | highly breathable monolithic membrane   | 262        |
| TRASPIR EVO 220                   | highly breathable monolithic membrane   | 274        |
| TRASPIR EVO 300                   | highly breathable monolithic membrane   | 282        |
| TRASPIR EVO SEAL 200              | highly breathable monolithic membrane, perforation-proof  | 266        |
| TRASPIR EVO UV 115                | highly breathable monolithic membrane resistant to UV rays                                      | 254        |
| TRASPIR EVO UV 210                | highly breathable monolithic membrane resistant to UV rays                                      | 270        |
| TRASPIR FELT EVO UV 210           | breathable monolithic membrane resistant to UV rays   | 269        |
| TRASPIR METAL                     | 3D mats for metal roofs   | 294        |
| TRASPIR NET 160                   | highly breathable membrane  | 261        |
| TRASPIR WELD EVO 360              | weldable monolithic breathable membrane   | 288        |
| TUBE STOPPER                      | cable sealing plugs   | 143        |
| VALLEY ALU                        | strengthening element for valleys   | 180        |
| VAPOR 140                         | vapour control membrane   | 235        |
| VAPOR 150                         | vapour control membrane   | 236        |
| VAPOR 225                         | vapour control membrane   | 240        |
| VAPOR ADHESIVE 260                | self-adhesive vapour control membrane   | 242        |
| VAPOR EVO 190                     | high performance vapour control membrane  | 238        |
| VAPOR IN 120                      | vapour control membrane   | 218        |
| VAPOR IN GREEN 200                | vapour control membrane based on natural cellulose  | 221        |
| VAPOR IN NET 140                  | vapour control membrane with reinforcement grid   | 219        |
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| VENT FOLD                         | pre-bent grid for ventilation   | 187        |
| VENT GRILLE                       | PVC ventilation grid  | 186        |
| VENT MESH                         | flexible ventilation grid   | 186        |
| VENT SHAPE                        | ventilation grid for roofs made of tiles of various shape                                       | 190        |
| WINDOW BAND                       | self-expanding sealing tape for windows/doors   | 110        |
| WINGBAG                           | inflatable air cushion with hand pump made of fibre-reinforced synthetic material               | 326        |

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#### USC

**STAPLERS** 

**GUNS** 

#### **United States Customary units**

**United States Customary Units** 

The United States Customary Units (USC) is a widely used system that evolved from the British imperial system. All customary units can be converted to International System (IS) units and vice versa.

330

332

The values are indicated in the International System and in the US Customary Unit to improve the catalogue usability and facilitate the decision-making process. Some values resulted from tests and have been converted to USC, so they are often rounded. To find the most accurate value, it is recommended to refer to the value expressed in the International System.

#### LEGEND

 $[m^2]$ Α area [ft<sup>2</sup>] [mm] В base [in] [mm] Н height [m] [ft] [mm] [in] L length [m][ft] [mm] Р depth [mm] thickness [mil] [mm] Ø through-element diameter

MD longitudinal values with respect to the direction of the membrane/tape rolls

CD transversal values with respect to the direction the membrane/tape rolls

TT integrated double tape

VOC Volatile Organic Compounds



pieces / package



rolls for pallet



rolls for pallet

















- FASTENING
- AIRTIGHTNESS AND WATERPROOFING
- SOUNDPROOFING
- FALL PROTECTION
- TOOLS AND MACHINES

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