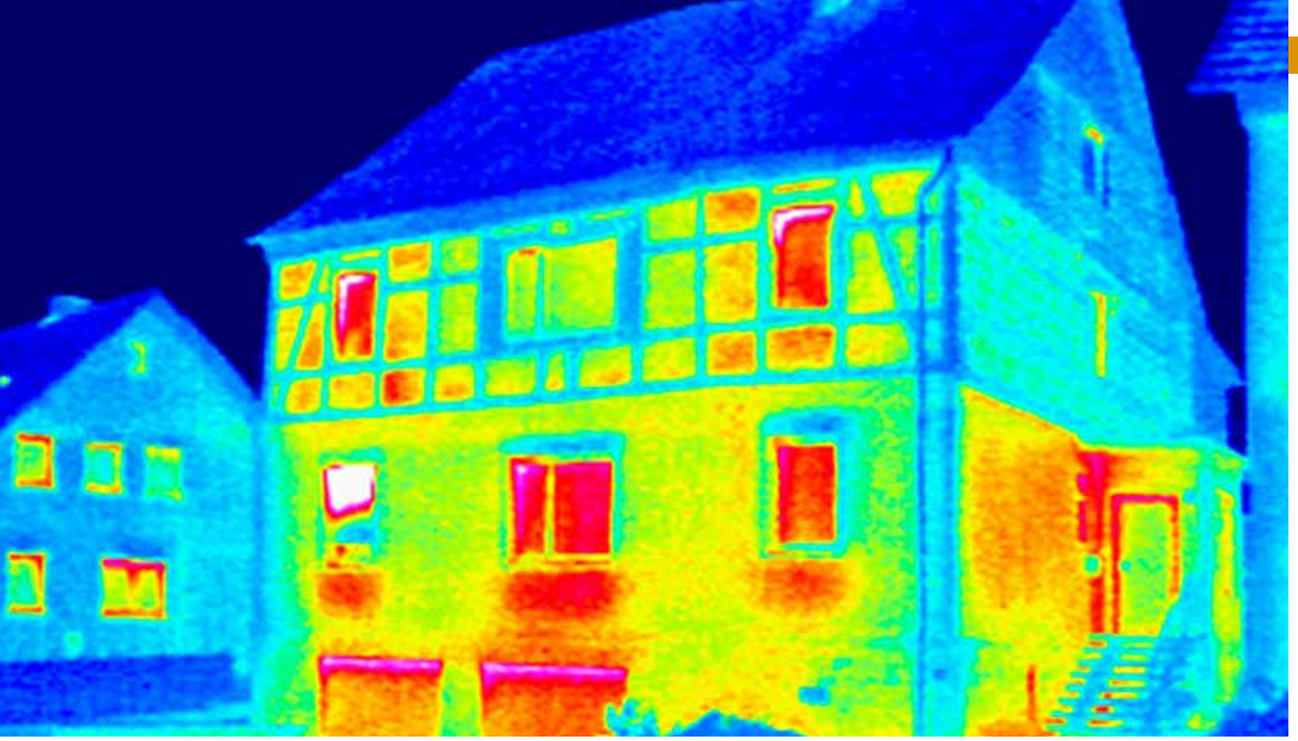
SOLITEX PLUS® System

Maximum protection for roofs

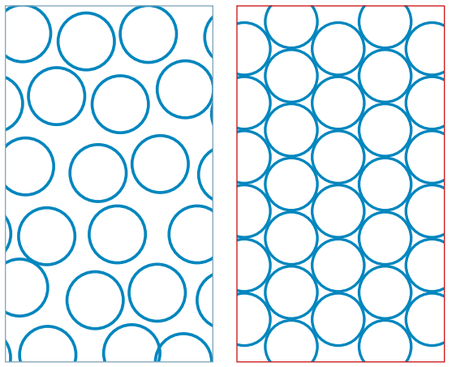
Highly permeable roof lining with moisture-managing TEEE functional membranes

pro clima®



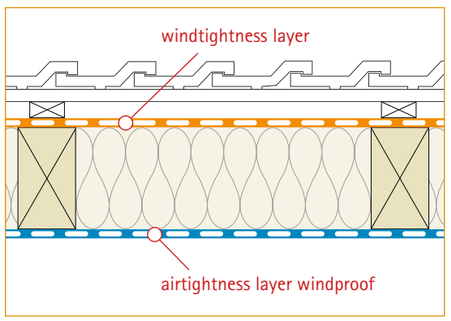
The ideal structure

Thermal insulation systems work on the basis of the inclusion of air in the insulation material (cellulose fibres, cork, wool and mineral fibres, other materials). These air pockets must be protected against air movements if the insulation is to have an insulating effect. For this reason, the insulating material should be sealed on all sides in the ideal insulating structure: i.e. airtight on the inside and windtight on the outside.



Insulation by stationary air

Left: Unprotected insulation material
Air movement in the porous structure reduces the insulating effect.
Right: Protected insulation material
No air movement possible in the porous structure, full insulation effect.
An example:
The thermal insulation effect of a woolen jumper is based on the stationary air inclusions in the fibres: as soon as a cold wind starts to blow, the insulation effect decreases. However, the effect is restored if you wear a thin windbreaker, which itself has no significant heating function, over the jumper.



Airtight on the inside, windtight on the outside

For this reason, the insulation material is sealed on all sides in the ideal insulation structure:
outside with the windtightness layer, e.g. an underlay or facade membrane that is open to diffusion, and on the inside with an airtightness layer, e.g. a vapour retarder.

The windtightness stops cold outside air flowing through the insulation. The airtightness provides protection against the entry of humid indoor air and thus against condensation and mould.

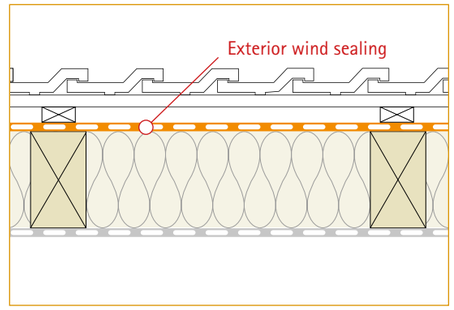
Note

Faultless installation work is important when installing air sealing, as leaks in surfaces and at joints will have consequences.

Why is windproof construction important?

Protection from wind and weather

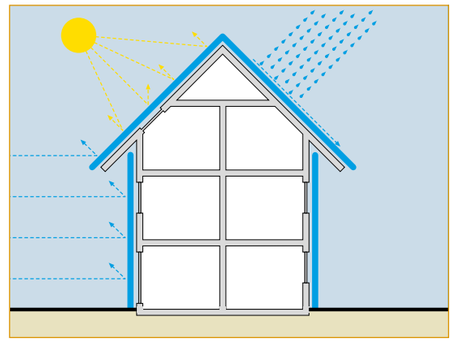
On the exterior side: A wind barrier such as a roof-lining or wall-lining membrane covers the insulation



The windproofing layer protects the thermal insulation from rain, snow and wind from the outside. It also ensures that the insulation will not be permeated by cold air and hence can fully unfold its effectiveness.
Thus the windproofing layer is critical for optimal effectiveness of the insulation. Mounted on the outside of the thermal insulation, it prevents cold outside air passing through the outer insulation layers and also ventilates the insulation layer.
Fixed air pockets in the material are required for the insulating effectiveness of cellulose, wood fibre, hemp, wool, mineral fibres, etc. The wind seal thus ensures the effectiveness of the thermal insulation and prevents localised cooling of surfaces adjacent to the inside of a room.
The windproofing layer provides ventilated constructions with bottom-ventilated roof seals with an additional level of protection from any dripping secondary condensation, rain and driving snow. A carefully executed windproofing layer increases the protection level to avoid convective air flows.

Requirements

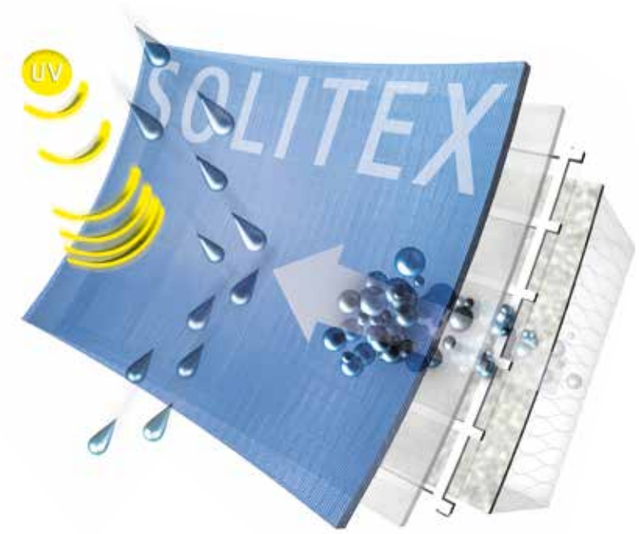
Durable, rainproof, diffusion-open, thermostable



Roof and facade membranes must meet high tightness requirements for protection from driving rain and water. At the same time, they should also be highly permeable to allow moisture to dry and evaporate quickly and reliably from the structural component to the outside.
The previously available microporous membranes met these requirements only to a limited extent. New, moisture-activated membranes with a non-porous, monolithic functional film offer significantly higher protection levels for structural components.

Best possible protection for roofs – SOLITEX

Windproofing with active moisture management



The roof lining membranes in the SOLITEX PLUS family are equipped with monolithic, non-porous functional membranes that actively manage moisture and which are made from state-of-the-art TEEE.
They offer significantly higher levels of structural protection compared with conventional, microporous membranes.
SOLITEX PLUS membranes have a non-porous, closed cell TEEE membrane, which provides particularly good protection against driving rain.
Compared to conventional roof lining membranes in which the permeability is achieved via air exchange through the microporous membrane, a SOLITEX PLUS membrane enables active diffusion along the molecular chains.
At the same time, SOLITEX PLUS membranes have a very low diffusion resistance with an s_d-value of 0.05 m, a g-value of 0.25 MN·s/g and a vapor permeance of 38 US perms).
Its active moisture transportation makes the TEEE membrane extremely quick drying, which optimally protects against ice forming on the membrane in winter. This is a plus for the protection of the structure because permeable roof lining membranes turn into vapour barriers when ice forms (ice is impermeable), thereby creating moisture traps.
Additional features of the TEEE membrane are its reliable protection against substances that impregnate wood (drops of water cannot penetrate the membrane even at reduced surface tension because there are no pores) and the particularly high thermal stability (melting point TEEE about 200 °C (390 °F), PP approx. 140 °C (280 °F).
This thermal stability gives the plastic an extremely high ageing stability – even for dark roofs.

Top performance for all requirements

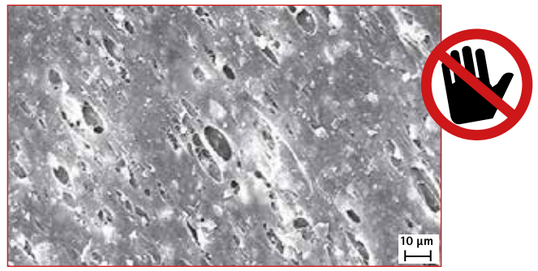
The functional film is reliably protected between two robust, particularly tear-resistant protective and covering fleeces made of polypropylene – ideal if there are high loads when walking on and laying the membranes, and when installing the roofing.

- ✔ The covering fleece is also water repellent and provides optimum protection against penetrating water. It protects the underlying specialist film from damage and UV radiation.
- ✔ The honeycomb structure also guarantees high slip resistance in wet conditions.
- ✔ As a result of the dark-grey colour of the top covering fleece, the membranes are anti-glare.
- ✔ Watertightness levels of 10 000 mm (approx. 33 ft) of water column are achieved, i.e. SOLITEX PLUS membranes are also impermeable to heavy driving rain.
- ✔ These membranes can be exposed to the elements for up to 4 months.

Conventional reliability – micropores

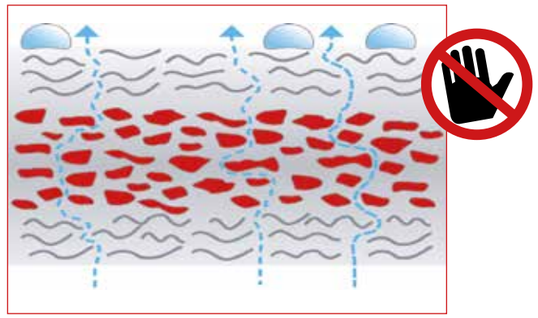
Microporous membrane: little protection against rainwater

Conventional PP membranes with micropores only protect against water from the outside when the surface tension of the drops makes them too large to pass through the pores of the membrane. However, in of case driving rain or when wood components or solvents lower the surface tension, considerable amounts of water may penetrate the insulation and cause structural damage and foster the growth of mould and mildew.



Microporous membranes become more diffusion-tight

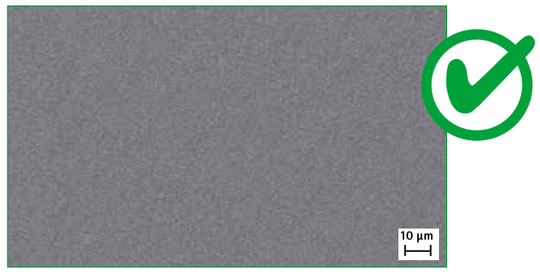
These microporous membranes must transport water vapour through tiny holes to the outside. This moisture transport is a passive process, which only works when a relatively high partial vapour pressure gradient is present. In modern, highly insulated structures, this is difficult to achieve. Another disadvantage arises when a lot of vapour must escape. This may lead to a moisture film forming on the inside of the membrane. The result is that the membrane becomes denser, the structure does not dry effectively, and damage may occur. If a film of moisture freezes in the winter, a vapour barrier effect may even be created.



Absolute permeability and maximum sealing: Monolithic SOLITEX membrane

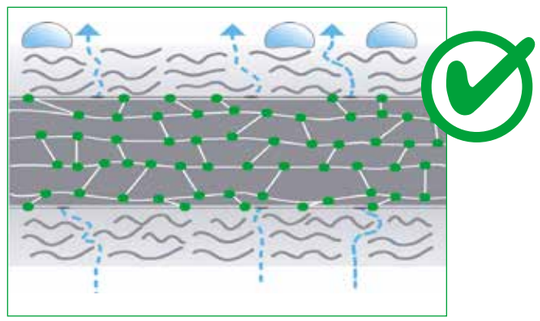
Pore-free membrane: high component protection

Pore-free membranes provide protection against driving rain in particular. Since their membrane functions without pores, even high impact speeds or reduced surface tension of water droplets are not a problem.
These monolithic membranes transport moisture to the outside – the more moisture is present, the faster the transport speed. Their diffusion resistance decreases. Only a minimal partial vapour pressure gradient is required for the transport.



Pore-free membrane: active moisture transport

The result is that non-porous, monolithic membranes with moisture-activated functional film deliver a high level of reliable protection from outside moisture for structural components while maintaining consistent diffusion-openness at the same time.



Conclusion

Conventional approach: Micropore membrane

Micropores in a functional film:

- ✖ Conventional protection against driving rain
- ✖ Passive moisture transport
- ✖ Large vapour partial pressure gradient required
- ✖ Wet membrane becomes more closed to diffusion

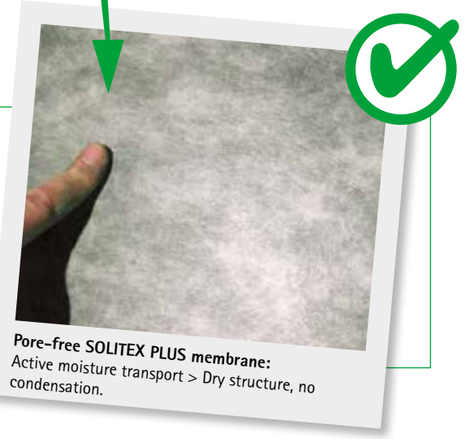
Microporous membrane:
No active moisture transport > A wet structure.

One roof, the same conditions, different results:
pore-free SOLITEX PLUS membrane on the hip roof, microporous membrane on the main roof surfaces to the left and right.

SOLITEX approach: Pore-free membrane for greater reliability

Pore-free SOLITEX membrane:

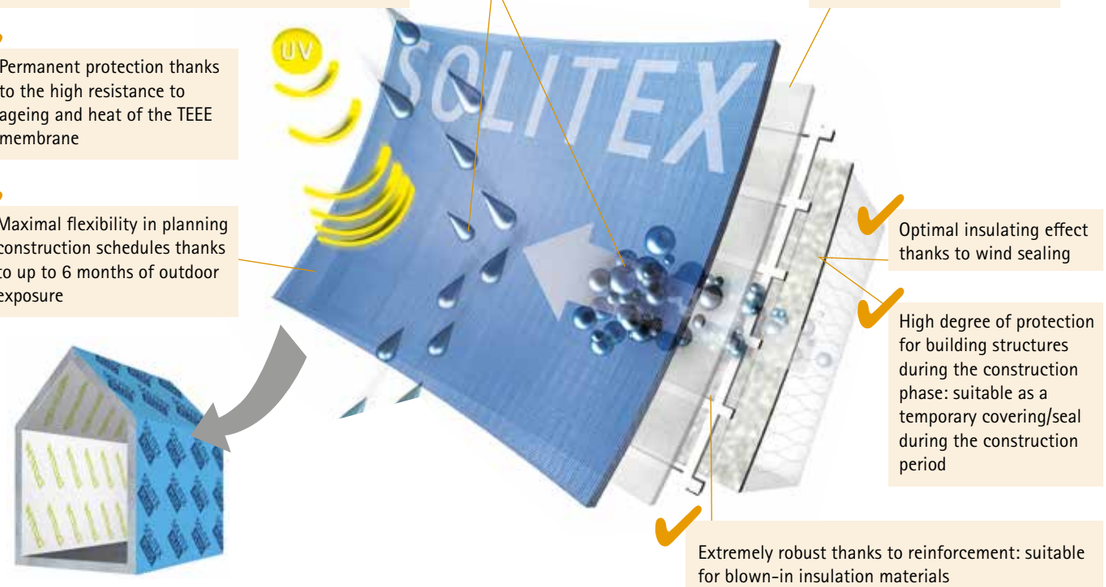
- ✔ Maximum protection against driving rain
- ✔ Water column > 10 000 mm (approx. 33 ft)
- ✔ Active moisture transport
- ✔ Minimum vapour partial pressure gradient required
- ✔ Wet membrane becomes more open to diffusion
- ✔ No tent effect
- ✔ Can be used as a temporary covering



Pore-free SOLITEX PLUS membrane:
Active moisture transport > Dry structure, no condensation.

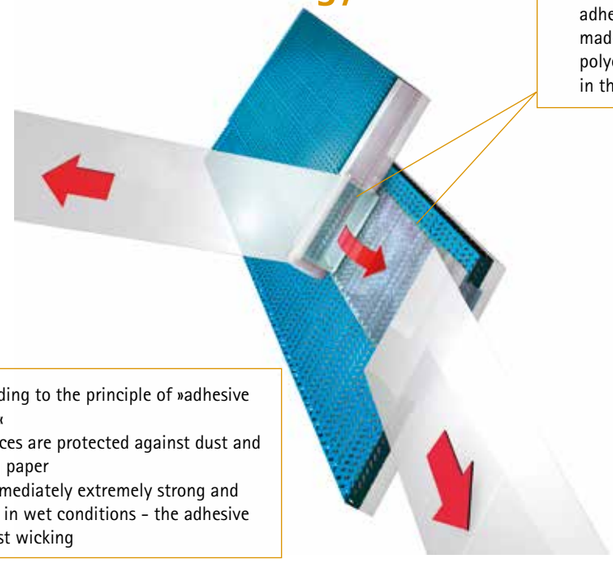
The SOLITEX membrane – Absolute permeability … and maximum sealing

- ✔ High degree of occupational safety, even for large-sized roof tiles, in accordance with the requirements of DIN 4426 »Equipment for protection against falls on roofs«
- ✔ Ensures reliable building components: highly diffusion-open and maximum protection against driving rain
- ✔ Dry building components: pore-free TEEE functional membrane actively transports moisture to the outside
- ✔ Permanent protection thanks to the high resistance to ageing and heat of the TEEE membrane
- ✔ Maximal flexibility in planning construction schedules thanks to up to 6 months of outdoor exposure
- ✔ Optimal insulating effect thanks to wind sealing
- ✔ High degree of protection for building structures during the construction phase: suitable as a temporary covering/seal during the construction period
- ✔ Extremely robust thanks to reinforcement: suitable for blown-in insulation materials



Reliable seals more quickly
pro clima's connect technology

- ✔ Two integrated self-adhesive zones made of waterproof polyolefin adhesive in the overlap area



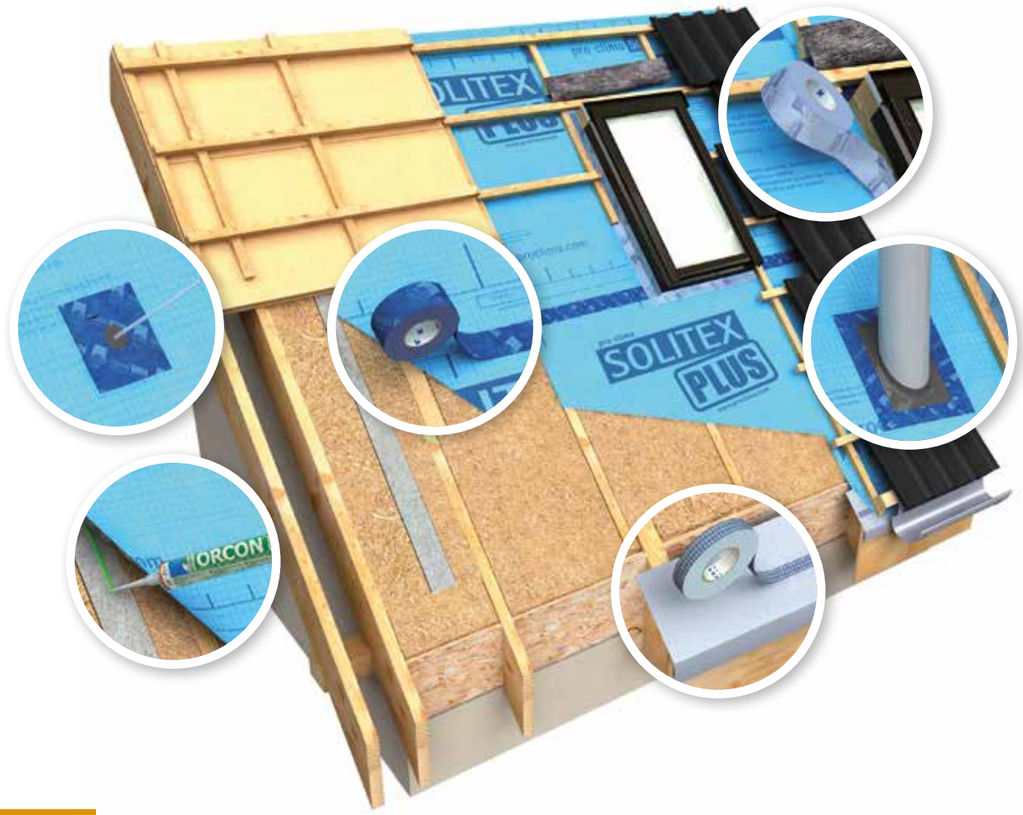
- ✔ Bonding according to the principle of »adhesive in an adhesive«
- ✔ Adhesive surfaces are protected against dust and dirt by backing paper
- ✔ The bond is immediately extremely strong and reliable – even in wet conditions - the adhesive protects against wicking

The SOLITEX® PLUS System

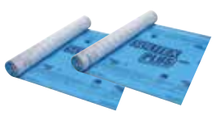
System with 4-ply, reinforced highly diffusion-open underlay and sarking membrane. Can also be used for temporary coverings. SOLITEX PLUS has a monolithic, pore-free functional membrane. This makes it watertight against water from the outside and also means that it can actively transport moisture from the building structure into the open at the same time. It is particularly suitable for applications with high demands with regard to tear-resistance (e.g. blown-in insulation).

Advantages

- ✔ Dry building components: pore-free TEEE functional membrane, humidity variable g value less than 0.10 MN·s/g (sd value: < 0.02 m)
- ✔ Maximum ageing resistance and thermal stability thanks to the TEEE membrane
- ✔ Especially good tear resistance due to its reinforcement: suitable for blown-in insulation, particularly good protection against penetration, high nail tear resistance
- ✔ 3 months of outdoor exposure.
- ✔ Reliable during the construction phase: suitable for temporary coverings during construction work



System core components



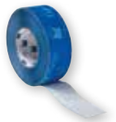
SOLITEX PLUS / SOLITEX PLUS connect (with self-adhesive zones)
4-ply sarking membrane and roof lining membrane, reinforced

ORCON F
For bonding to adjacent components

100 YEARS ADHESION
✔ successfully tested
✔ unique worldwide
proclima.com/100years

phA CERTIFIED COMPONENT Passive House Institute
INTELLO · INTELLO PLUS
AEROSANA · VISCONN
TESCON VANA · ORCON F
CONTEGA SOLIDO SL
KAFLEX · ROFLEX

TESCON VANA
For sticking membrane overlaps



TESCON No.1
Flexible multi-purpose adhesive tape for airtight bonds

TESCON NAIDECK
Double-sided nail sealing tape

Best possible protection for roofs and walls

Robust structure

The SOLITEX PLUS underlay membrane has a 4-ply structure. Its TEEE functional membrane is reliably protected between two robust, particularly tear-resistant protective and covering fleeces made from polypropylene. The additional reinforcement increases the tear-resistance of the membrane – which is very important given the high loads that occur when installing or walking over the membranes and roof covering.
In addition, the covering fleece is designed to be water-repellent and provides ideal protection against penetrating moisture. The special film that is located beneath it offers protection against damage and UV radiation. The honeycomb structure guarantees a non slip surface even in wet conditions. The membranes are glarefree as a result of the blue colour of the upper covering fleece. The special membrane has a watertightnessof over 2,500 mm of water column, i.e. it is watertight even when subjected to strong driving rain.
The membrane can be exposed to outdoor weathering for three months. It can onlybe fastened with staples in the protected overlap area.

TEEE membrane watertight and diffusion open

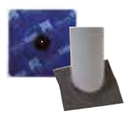
SOLITEX PLUS membranes have a pore-free, closed-cell TEEE membrane that offers out-standing good protecti-on against driving rain. In contrast with conventional sarking mem-branes where diffusion results from air exchange through a microporous membrane, diffusion occurs actively along the molecule chains in the case of the SOLITEX membrane. At the same time, SOLITEX PLUS has a humidity-variable diffusion resistance that attain sd values significantly below 0.02 m. With its active moisture trans-port, the TEEE membrane has an extremely quick drying ability, which provides the best possible protection for the membrane against against ice formation in winter. Once ice forms, permeable underlay and sarking membranes are transformed into vapour barriers (ice is impermeable to diffu-sion) and effectively become moisture traps. Other particular features of TEEE membranes include reliable protection in the presence of wood preservatives (the membrane cannot be penetrated as there are no pores present) and their particularly high thermostability (melting point of TEEE approx. 200 °C, PP approx. 140 °C). This stability at high temperatures gives the plastic material extremely high ageing stability over a period of decades – even on dark-coloured roofs.

Supplementary products for detail solutions

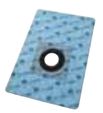
TESCON PROFIL
For joints at windows, doors and corners

DUPLEX
Double-sided adhesive tape for sticking membrane end joints and other joints

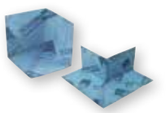
TESCON PRIMER RP
For quick and easy application of primer



KAFLEX / ROFLEX
Seal grommets for cable and pipe feed-throughs



ROFLEX exto
Vent pipe grommet for the windproof adhesion to pipes of vent tiles



TESCON INCAV / INVEX
Self-adhesive 3D shaped elements for interior and exterior corners

Planning and construction guidelines

In certain cases, there are differing requirements and conditions for the use of underlay membranes in various countries. For example, these might relate to minimum roof slopes or possible additional measures such as joint bonding or the use of nail sealing tape.
For this reason, please always observe the valid national regulations that apply to the use of underlay membranes in each specific case.

Areas of application

Membranes in the SOLITEX PLUS family can be used as both underlay and sarking membranes. They stop cold air from flowing through the building structure and ensure that the thermal insulation works in an optimal manner. With its extremely high level of watertightness and high stability, the SOLITEX PLUS family can also be used as a temporary covering.
They are suitable as an additional measure for rainproofing as sarking membranes when covering a roof with roofing tiles with simple overlapping. When used as an underlay membrane with simple overlapping on wooden decking, SOLITEX PLUS membranes are suitable as an additional measure for rainproofing even in the case of more demanding requirements.

Use as a temporary covering

SOLITEX PLUS membranes can be used as temporary covering for up to 4 months to protect the building structure during the construction phase.
The minimum pitch for the use of SOLITEX PLUS membranes is stipulated by national regulations in certain cases. For further information, please contact the pro clima partner in the country where the membranes are to be used. System adhesive tapes and adhesives should be used to stick overlaps and joints.
The connect variants have two self-adhesive zones for reliable exterior sealing. Dark marks may form on the membrane as a result of rainwater. These have no influence on the high high level of watertightness and the effectiveness of the interior membrane.

No rear ventilation is necessary

No rear ventilation is necessary thanks to the high diffusion permeability of pro clima SOLITEX PLUS, rear ventilation of insulation is not required. The membrane can be applied directly onto the thermal insulation in all cases, i.e. the insulation thickness can be equal to the full height of the rafters. In the case of non-insulated attics, it is advantageous to provide hip ridge ventilation in order to ventilate the attic space. Complicated and often ineffective aeration and ventilation details at the eaves, ridge, valley, hip and additional roof features are thus unnecessary.

Maximum diffusion permeability

Moisture can dry out of the structure to the outside more easily and more quickly. This is advantageous both during the construction phase (when construction timber may be moist) and during normal use (when moisture from indoor air penetrates into the structure by diffusion or convection). As a rule, moisture due to construction work should be able to escape the building quickly by ventilation through open windows. Dryers can help to speed up the drying process in wintertime. This helps to avoid permanently high levels of relative humidity.

No tent effect

The pore-free SOLITEX PLUS membrane offers particularly good protection against driving rain. Membranes in the SOLITEX PLUS family can be installed directly on top of insulation materials or roof decking. A tent effect is reliably prevented by the monolithic membrane and the multi-layer structure. The term 'tent effect' refers to the phenomenon that watertight tent sheets cause the entry of large amounts of moisture into building components at their points of contact.

Retrofitting underlays

Insufficient roof linings can be rectified internally by retrofitting SOLITEX PLUS roof lining membranes.
In cases where there were previously no underlays, these can be retrofitted using SOLITEX PLUS. SOLITEX PLUS membranes provide optimal protection for the insulation structure thanks to the new technology of pore-free membranes. They are highly permeable and, at the same time, particularly resistant to driving rain, tear-resistant and insensitive to wood preservatives.
SOLITEX PLUS 1000 and 3000 can be combined with all mat-shaped and panel-shaped insulation materials.

Installation and fastening

SOLITEX PLUS is installed with the dark grey covering fleece side (printed side) facing outwards. The membranes can be installed taut parallel or perpendicular to the eave. Horizontal installation (perpendicular to the eave) is preferable with regard to water flow paths during the construction phase. When the product is used as a sarking membrane, the rafter spacing is limited to 1 m (3 ft).
Use clout nails or fastening staples that are at least 10 mm/0.39" wide and 8 mm/0.31" long to attach the membranes. The membranes can only be fastened with staples in the protected overlap area. The maximum distance between fasteners is 10 to 15 cm/4" to 6".
Allow for an overlap of at least 10 cm/4" between the membranes. A larger overlap is recommended if the roof slope is less than the critical roof slope.

Approval and composition

The special membranes in the SOLITEX PLUS family are made of a thermoplastic elastomer-ether-ester; the protective and covering fleeces are made of polypropylene. All SOLITEX PLUS membranes have been tested in accordance with the requirements of EN 13859-1. They have the CE label.

Technical hotline

If you have questions on applications, please contact: proclima.com/service/technical-support

General information on sticking the membranes

pro clima adhesive tapes for exterior bonding have very good adhesion behaviour on:

- Subsurfaces that are dry, smooth and free of dust, bitumen and grease
- Smooth surfaces such as wood-based panels (chipboard, OSB panels, plywood)
- Planed and painted wood
- Plastic, glass, metal, and PE, PA, PP and aluminium sheeting (surface tension > 40 dyn)
- Smooth mineral subsurfaces (e.g. plaster or concrete; pre-treated with e.g. TESCON SPRIMER) and
- Wood fibre underlay panels (pre-treated with e.g. TESCON SPRIMER)

Adhesion to frozen surfaces is not possible. Subsurfaces must be suitable for permanent bonding. The best results in terms of structural stability are obtained on high-quality subsurfaces. To ensure optimal bonding, the tape must be rubbed into place carefully e.g. with pro clima PRESSFIX. A hard subsurface (such as timber, solid thermal insulation materials) is advantageous here. No permanent tensile or shear stresses may act on bonds implemented using adhesive tape. It is your responsibility to check the suitability of the subsurface. Adhesion tests may be advisable.

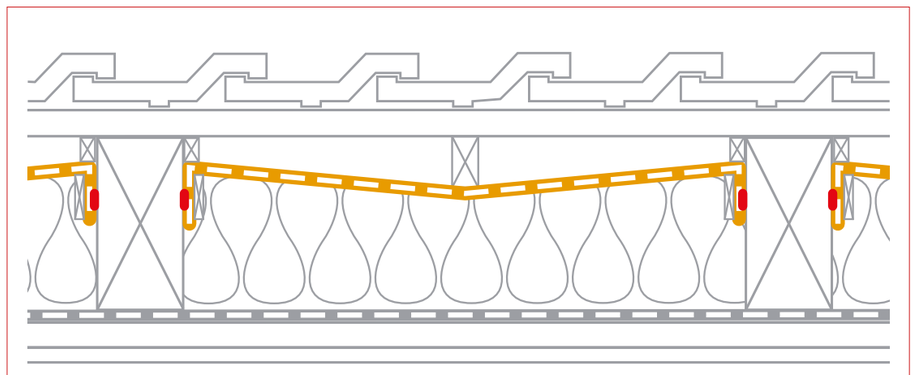
Repairs

Surface defects can be sealed with SOLITEX PLUS membranes and the system adhesive tapes. The repair patch on the roofing membrane should then be positioned underneath the overlap of the next continuous roofing membrane above the defect and should be joined in a waterproof manner.

Conditions

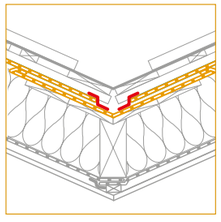
SOLITEX PLUS membranes should be laid with the printed side facing the installer. The membranes are to be installed as an underlay or sarking membrane horizontally (parallel to the eave) in a taut manner with no sagging. When using as a sarking membrane the spacing between the rafters is restricted to 1 m (3 ft). pro clima's Engineering Hotline or your local pro clima partner will be glad to provide information on how to proceed in the case of larger spacings.
The membrane must not be secured in areas where water collectively drains off (e.g. in grooves).
In the case of uninsulated, undeveloped attic floors, ridge ventilation should be provided. For this purpose, the SOLITEX membrane should finish 5 cm (2") before the ridge. In addition, the undeveloped attic floor should be provided with permanent ventilation devices. The membrane should be protected against the long-term effect of UV (e.g. by blocking the entrance of light through the windows).

To protect the construction during the building SOLITEX PLUS roof lining membranes can be used as a temporary roof cover for up to 4 months.
In this case the roof pitch must be at least 14°. The system components TESCON NAIDECK nail sealing tape, ORCON F joint adhesive and TESCON VANA for sticking overlaps or joints must be used. The connect versions have two self-adhesive zones for secure exterior sealing. The applicable national regulations must be taken into account when installing and sticking pro clima underlay membranes.
According to the technical regulations of the roofing trade association, they are suitable as a sarking membrane for covering a tiled roof with simple overlapping as an additional protective measure against rain. When using as a roof lining membrane with simple overlapping on a timber shell, the SOLITEX PLUS membranes are also suitable at elevated requirements as an additional protective measure against rain.



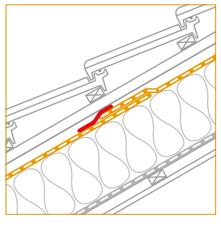
Installation instructions

Valley



Lay a SOLITEX PLUS strip longitudinally along the middle of the valley (soaker stripe). Fold back the membranes by approx. 5 cm on their long sides and attach using staples sparingly. Stick the membranes placed over the valley membrane using TESCON VANA.

Sticking the membranes

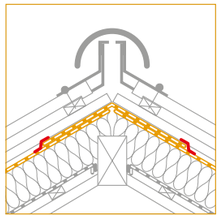


Install the membranes with 10–15 cm overlap. The membranes should be fastened in a manner that is protected against moisture in the upper third of the overlap area of the membrane that will later be the overlay and underneath the counter batten. Use galvanised staples (min. 10 mm wide and 8 mm long). Fasteners should not be applied in areas where water run-off is collected (e.g. in roof valleys).

Laying roof area

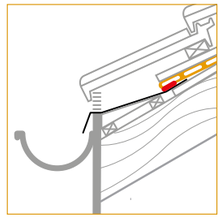
The SOLITEX PLUS membrane is extremely stable in form, making it quick, easy and accurate to lay. The overlap on the membranes should be at least 100 mm, a distance which is easy to stick to using the printed-on markings at 150 mm intervals. A greater overlap is recommended if the roof pitch is less than the regulation amount. The membrane is attached using rust-resistant wide-headed pins or staples in the top third of the lining area.

Ridge and rake



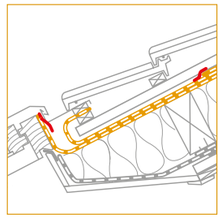
In the case of fully insulated rafters, place SOLITEX PLUS over the ridge/hip and attach in place using staples in the area of the counter batten. Overlap relative to the membrane underneath by at least 22.5 cm. Stick the membrane overlap using TESCON No.1 / TESCON VANA or pro clima DUPLEX double-sided adhesive tape. Ridge ventilation should be provided in the case of cold attics where insulation is applied at joist level. To do so, install SOLITEX PLUS in such a way that it stops 5 cm before the ridge. In addition, permanent ventilation fittings should be provided in the unconverted attic. Please refer to BS 5250 for further ventilation guidelines for various roof types.

Eaves



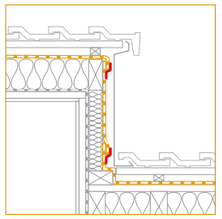
pro clima SOLITEX PLUS must be joined at the eaves in a waterproof manner. Position the membrane on a UV stable eave flashing or eave strip. Stick in place using the double-sided pro clima DUPLEX adhesive tape or the single-sided TESCON No.1 / TESCON VANA adhesive tape, ensuring that there are no folds or creases.

Penetration of roof windows, chimneys, pipes and other roof fittings



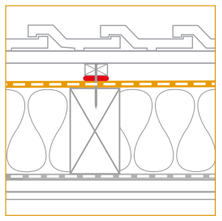
Installation of a gutter above/adjacent to the roof window is recommended by fitting a second SOLITEX PLUS membrane as an underlay. This must be guided into the overlap area of the next continuous roofing membrane above the integrated roof element. Create the gutter in such a way that moisture is guided by a continuous counter batten into the next adjacent field that does not have an integrated roof element.

Dormer windows



Allow around 15 cm of SOLITEX PLUS to run up onto the dormer cheek and attach it at the upper membrane edge using staples. SOLITEX PLUS can also be used in the area of dormer cheeks to provide protection against outdoor exposure during the construction phase.

Nail sealing



TESCON NAIDECK nail sealing tape prevents water entering through nail, staple or screw holes during the construction phase, for example. Stick the tape to the back of the counter battens before attaching them. After putting the counter batten in place on the rafters, remove the backing paper and gradually affix the batten using nails, for example. This is essential in low pitch or very exposed roofs.

Fitting instructions

General

- The pro clima SOLITEX PLUS system can be used as an underlay or sarking membrane. It stops cold air from flowing through the building structure and ensures that the thermal insulation performs to its optimum efficiency (see diagram A & B).
- SOLITEX PLUS underlays are not effected when used with undried timber preservatives (water or solvent based).
- SOLITEX PLUS underlays can be used as a temporary water resistant roof covering for not more than 3 months prior to the installation of slates or tiles.
- SOLITEX PLUS should be stored in dry conditions, protected from the weather.
- Please refer to relevant national standards such as the NSAI Irish Code of Practice for Slating and Tiling for additional good practice guidance. .
- Counter battens are recommended and considered best practice for optimum performance of vapour permeable roof underlays. A counter batten provides a clear zone for moisture to drain from the roof, especially at the building phase. It also provides a clear ventilation zone between the roof covering and the membrane allowing vapour to safely disperse and also to reduce overheating between the roof covering and membrane.
- When used unsupported without counter-battens, a nominal 10mm drape must be provided between supports to allow a clear drainage path for moisture and prevent excessive deflection under wind loads. (see diagram C) .

Diagram A

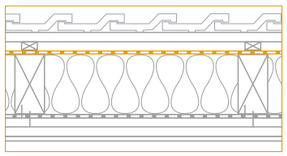


Diagram B

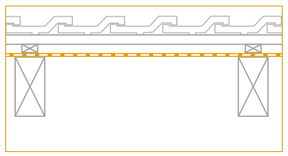
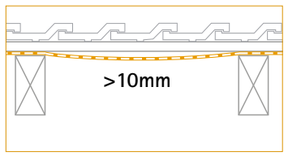


Diagram C



Laying Instructions

- pro clima SOLITEX PLUS is installed with the blue covering fleece side (with writing) facing outwards. Provided the roof is counter battened, SOLITEX PLUS may be installed taut parallel or perpendicular to the eave. Horizontal installation (perpendicular to the eave)is preferable with regard to water flow paths during the construction phase. When it is used as a sarking membrane, the rafter spacing is limited to 100 cm. Use clout nails or fastening staples that are at least 10 mm wide and 8 mm long to attach the membranes. **The membranes can only be fastened with staples in the protected overlap area.** The maximum distance between fasteners is 10 to 15 cm. Provide membrane overlaps of at least 10 cm in the case of roof pitches greater than 35°. Provide overlaps as per the following table for lower roof pitches.
- SOLITEX PLUS should be overlapped minimum 100 mm (an overlap line is clearly marked on each roll). Overlaps of the membrane should be in accordance with BS 5534:2014 Annex A, Figure A.2, with horizontal laps secured by battens.
- Fix the underlay using good quality extra large clout head nails, galvanised or copper.
- SOLITEX PLUS can be easily cut with a sharp knife and remains flexible at all normal working temperatures.

Roof pitch	Horizontal lap slope	Vertical lapacross slope
12.5° - 14.0°	225 mm	100 mm minimum
15.0° - 34.0°	150 mm	100 mm minimum
35.0° and over	100 mm	100 mm minimum

Technical data

Attribute	Norm	Value
Length		50 m
Width		1.5 m
Surface weight	BS EN 1849-2	170 g/m²
Thickness	BS EN 1849-2	0.55 mm
s_d-value / s_d-value humidity variable	BS EN ISO 12572	0.04 m / 0.02 m
g-value / g-value humidity variable		0.20 MN·s/g / 0.10 MN·s/g
Fire behaviour	BS EN 13501-1	E
Exposure time		3 months
Water column	BS EN ISO 811	> 2500 mm
Water resistance un-/aged*	BS EN 13859-1	W1 / W1
Tensile strength MD/CD	BS EN 13859-1 (A)	450 N/5 cm / 330 N/5 cm
Tensile strength MD/CD aged*	BS EN 13859-1 (A)	495 N/5 cm / 350 N/5 cm
Elongation MD/CD	BS EN 13859-1 (A)	15 % / 15 %
Elongation MD/CD aged*	BS EN 13859-1 (A)	15 % / 15 %
Nail tear resistance MD/CD	BS EN 13859-1 (B)	370 N / 400 N
*) Artificial ageing by long term	BS EN 1297/ BS EN 1296	passed
Flexibility at low temperature	BS EN 1109	-40 °C/-40 °F
Temperature resistance		-40 °C to +100 °C / -40 °F to +212 °F

CE
07
DIN EN 13859-1

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BBA APPROVAL INSPECTION TESTING CERTIFICATION

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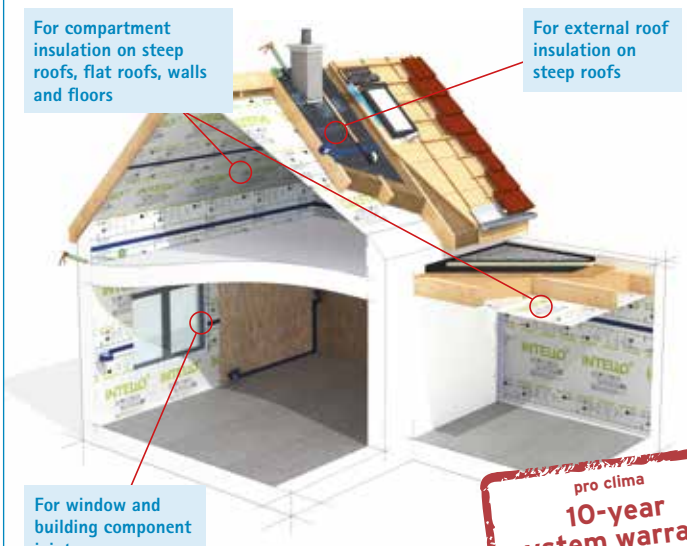

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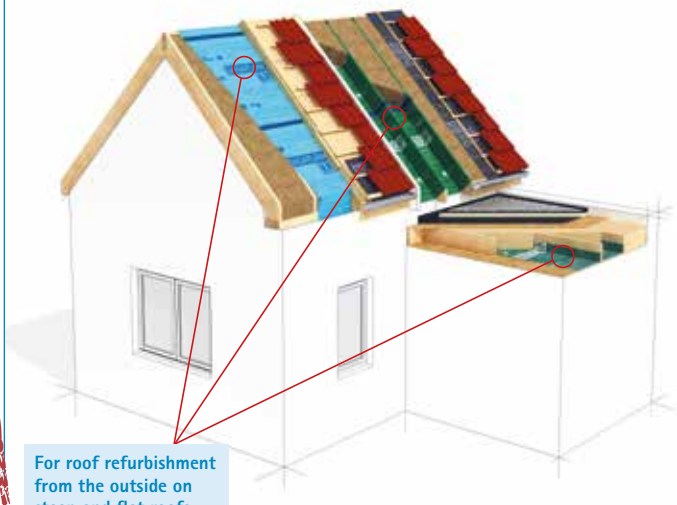
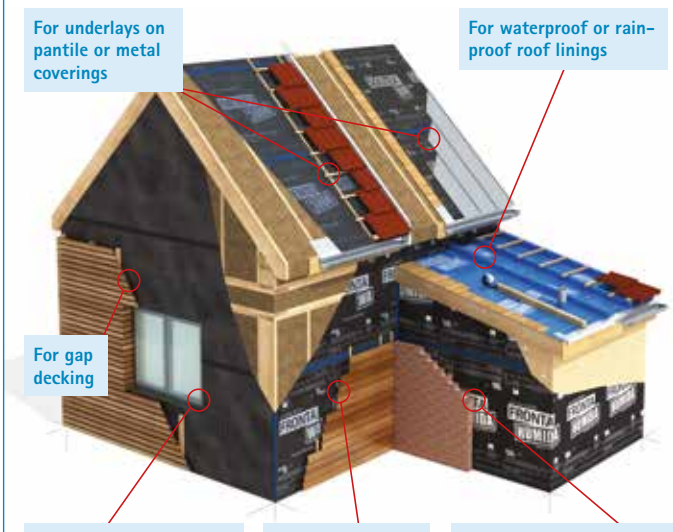


Exterior wind sealing for roofs and walls



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