

pavatex

Build. Insulate. Relax.

Insulation systems



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PAVATEX – insulation systems

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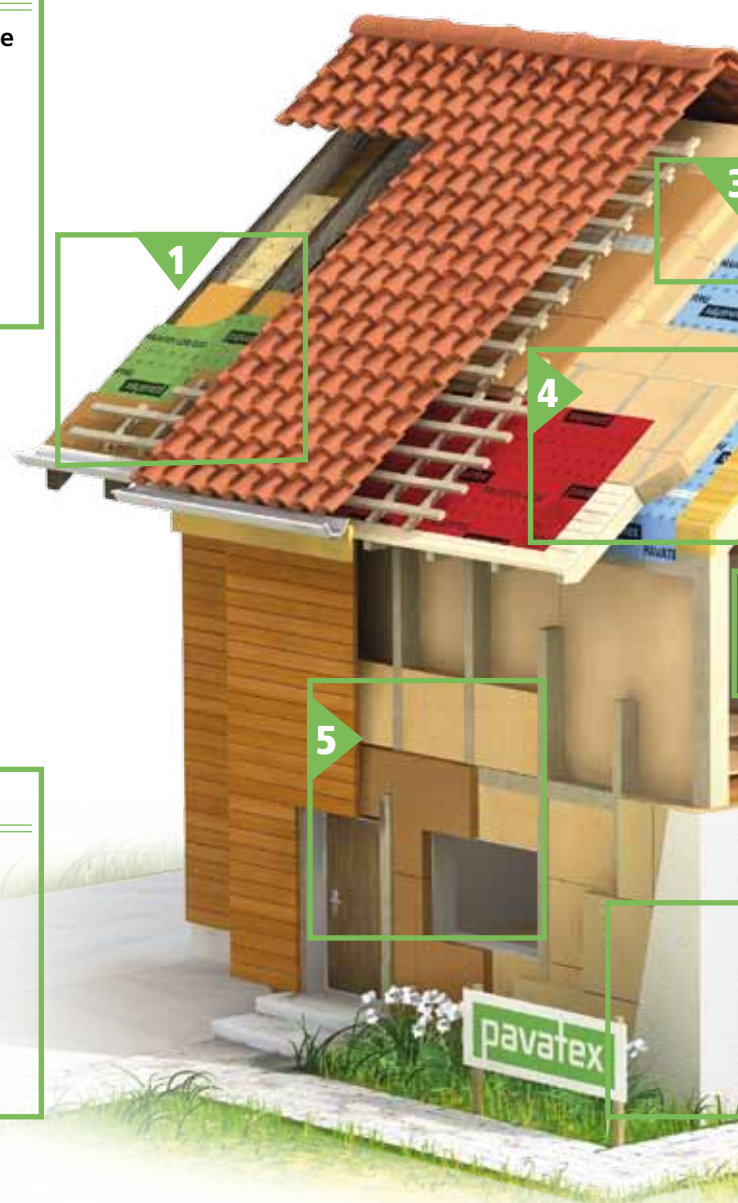
Insulating and sealing with PAVATEX – overview of systems

Roof systems – renovation

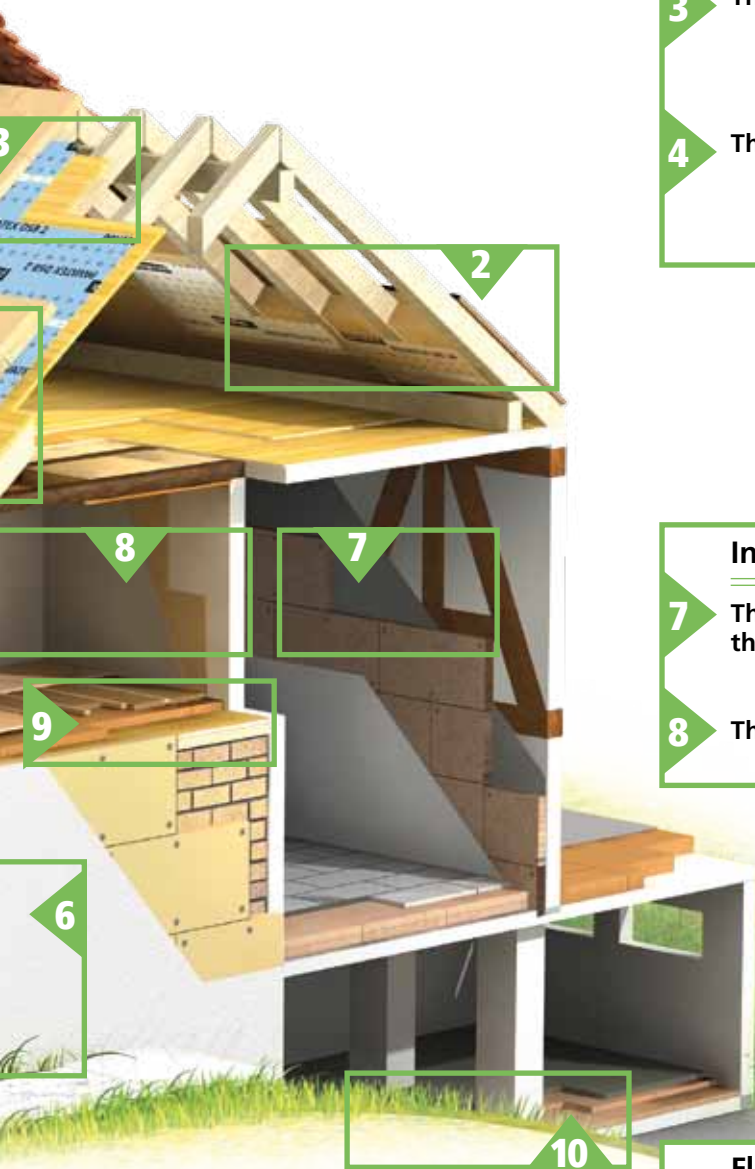
- 1 The perfect solution for roof renovation from outside**
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PAVATEX LDB 0.02
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External wall systems

- 5 The high-insulation solution for ventilated facades**
PAVATEX DB 3.5
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- 6 The ideal solution for rendered external walls**
PAVATEX DB 3.5
PAVAFLEX
DIFFUTHERM



You can find additional systems at www.pavatex.com or in our country-specific brochures



Roof systems – new construction

- 3 The classic above-rafter insulation system**
PAVATEX DSB 2
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GENERAL INFORMATION

This chapter provides information about handling, processing and working with PAVATEX woodfibre boards.

Transport

Edge protection

Woodfibre boards have a vapour-permeable structure. The areas along the board edges are particularly vulnerable to damage from incorrect handling. PAVATEX boards are packed flat on pallets and have additional protection at corners and exposed surfaces.

Securing on the vehicle bed

For transport, it is important to secure the pallets against sliding or tipping on the cargo deck. If, for example, lashing straps are used to hold the pallets, additional edge protection is essential to avoid damaging the upper sheet edges.

Pallet loading

To securely load PAVATEX products, it is important to adhere to maximum stack heights:

- Pallets of PAVAFLEX must not be stacked
- If pallets are more than 1.3 metres tall, no more than 2 pallets may be stacked.
- If pallets are less than 1.3 metres tall, up to 4 pallets may be stacked.

While loading and unloading, pay special attention that the forks of the lift do not dent and damage the pallets.

PAVATEX is responsible for pallet loading at PAVATEX plants.

Storage

Storage in the transfer hub

The maximum transport stack heights also apply to storage:

- Pallets of PAVAFLEX must not be stacked
- No more than 2 pallets may be stacked if the pallets are more than 1.3 metres tall.
- Up to 4 pallets may be stacked if the pallets are less than 1.3 metres tall.

Ensure that pallet stacks are aligned and not staggered. With the exception of ISOLAIR, all PAVATEX-products must be stored in a dry place and protected from moisture. The storage area must be level so that the pallets or pallet stacks are stable and secure.

Storage at the building site

The guidelines for storage in the also apply for storage of unopened pallets on site. Opened pallets of all PAVATEX products must be suitably protected from the weather.



Processing

Transport

The insulation boards can be placed (e.g. on the roof) individually or as a unit on the pallet. Normal lifting equipment such as a crane or conveyor belt are used. For PAVATHERM-PLUS and PAVATHERM-COMBI, Pavatex has developed a pallet which can be split. Thanks to this new system, two pallets can be lifted on to the roof together or separately as individual pallets. This provides greater efficiency and flexibility in processing.

Cutting PAVATEX insulation boards

The thicker, rigid woodfibre and roof insulating sarking boards can be easily worked on using common woodworking tools:

- The rigid, woodfibre boards up to 80 mm can be easily cut using hand-held circular saws. The blade must have a large number of teeth and run at high cutting speed.
- Use of a reciprocating saw is the easiest and fastest way to cut all thicknesses of PAVATEX insulation boards with a power tool. Use of a wide-toothed saw blade is recommended.
- The mounted chainsaw is another possibility for cutting woodfibre insulation boards up to 200 mm in thickness. A guide rail and appropriate dust collection are required.
- Jigsaws can also be used without difficulty, particularly for trimming or cut-outs.

A sharp knife is sufficient for the thin, hard fibre boards (e.g. PAVASTEPI).

Carrying the boards

Profiled boards increase product stability. For smooth installation of the insulation boards, it is important to treat the board edges with care and avoid damage during use.

Walking on boards on the roof

PAVATEX insulation boards can break. Boards laid over the rafters must therefore only be stepped on when directly on top of a rafter.

Cutting PAVAFLEX

PAVAFLEX is a flexible insulation board and can be worked with the following cutting tools:

- The PAVATEX insulation knife is suitable for small quantities and limited thicknesses.
- Use of a reciprocating saw is the easiest and fastest way to cut any thickness of PAVATEX insulation boards with a power tool. Recommendation: Serrated blade with little sawdust creation.
- PAVAFLEX can be cut cleanly and almost dust-free with a band saw. Usually, the limiting factor is the small saw table and narrow width of cut.
- The hand-held circular saw is also suitable for PAVAFLEX.

Tip: Use of dust extraction and wearing a dust mask for protection against dust.





Fixing to the roof

Counter battens

Final attachment of PAVATEX insulation boards to the roof is done with counter battens. The counter battens are attached using either normal or twin thread screws through the insulation and sheathing directly into the rafters. Depending upon the screw manufacturer, driver bits may help to achieve the correct angle.

Tile battens are attached to the counter battens for installation of roofing tiles. The horizontal batten spacing is dependent on the technical requirements of the roofing tile. The quantity and size of screws must be determined in accordance with the screw manufacturer's specifications and country-specific standards.

Fixing to the wall

The type of fixing depends on the particular substrate to which the PAVATEX products are fixed:

- Timber substrate (solid timber elements and timber frame construction): Staples or screws.
- Masonry substructure : Screws with wall plugs or supplementary adhesive beads at edges.

Staples

The woodfibre insulation boards are fixed with stainless-steel wide crown staples. This fixing method is only suitable for timber construction. It is characterized by very fast fixing – especially in off-site prefabrication.

Wide-crown staples, especially those developed and tested in-house specifically for woodfibre insulation boards such as DIFFUTHERM, are used here.

Screws

Depending on the application, work is carried out using screws with universal or specially-developed thread geometry for timber construction, so-called twin-thread screws, when fixing PAVATEX insulation materials. The quantity and size of screws must be determined in accordance with the screw manufacturer's specifications and country-specific standards.

Wall plugs

The PAVATEX woodfibre insulation boards such as DIFFUTHERM can be attached with special wall plugs. The wall plug is screwed in flush with the surface of the woodfibre insulation board. The screw must penetrate at least 30 mm into the load-bearing substructure. The quantity and size of screws must be determined in accordance with the screw manufacturer's specifications and country-specific standards.



Disposal

Insulation boards

PAVATEX insulation boards meet all environmental requirements, from manufacture to disposal. That is why undamaged boards (e.g. PAVATHERM or ISOLAIR) can always be re-used. Otherwise, PAVATEX woodfibre boards can also be utilised for thermal energy generation. For certain products, there is also the possibility of composting the boards. Information on composting or disposal can be found in the product data sheets.

Packing material

The pallet wood can be utilized thermally. Packaging film is considered to be waste and must be disposed of in accordance with waste regulations.





Sheathing

Sarking has the task of excluding rain, temporarily diverting rainfall and protecting from drifting snow until the roof covering is in place. At higher elevations, they also have a protective function against standing water trapped by snow. A distinction is made between overlapping, closed-joint and jointless types of sarking. All three types are capable of directing rainwater and protecting from environmental impacts. Only closed-joint and jointless sarking can achieve protection against standing water trapped by snow.



- ✓ Can be left exposed for up to three months thanks to its water-repellent treatment.
- ✓ Noticeably improved sound insulation thanks to fibrous board structure and high weight per unit area.
- ✓ Outstanding summer heat protection, thanks to high heat storage capacity.
- ✓ Reduction of heat losses thanks to improved air tightness.

With ISOLAIR

Classic sarking



ISOLAIR



For connections and sealing: PAVACOLL, PAVAPRIM, PAVABASE, PAVATAPE 75/150

With PAVATHERM-PLUS

Sarking with additional insulation performance



PAVATHERM-PLUS



For connections and sealing: PAVACOLL, PAVAPRIM, PAVABASE, PAVATAPE 75/150

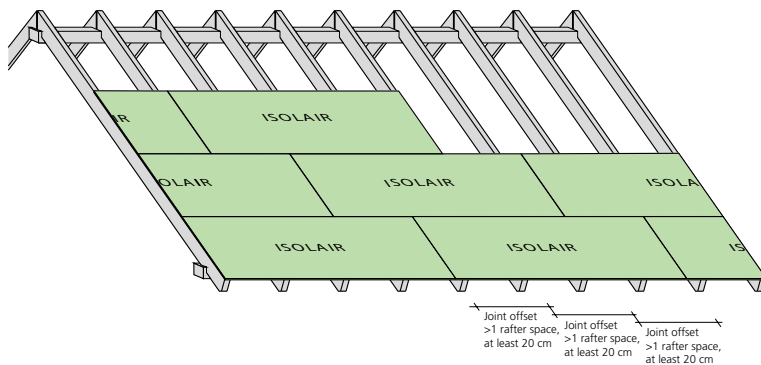
General processing information

Starting at the eaves, ISOLAIR sarking-boards and PAVATHERM-PLUS insulation boards are laid with tightly-fit joints, using adhesive if necessary. The second row of

boards is started with the cut-off from the first row, but with a joint offset of at least one rafter space. The board ridge/tongue must point towards the roof ridge. With

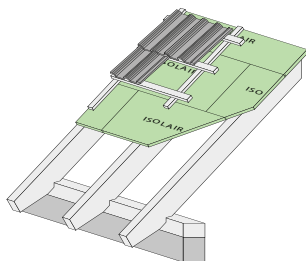
PAVATHERM-PLUS, the coated surface must always face upwards. There is no special top or bottom side for ISOLAIR boards, so the boards may be used either way up.

Installation principle (schematic representation)



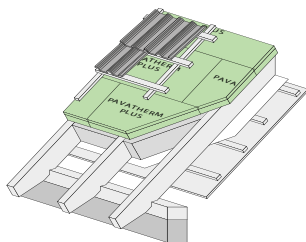
Expansion joints must be arranged for eaves lengths greater than 15 m by making a 5-mm wide separation cut directly over a rafter after the entire area is laid. Finally, seal the groove with PAVATAPE butyl rubber tape.

Sarking for roofs without insulation



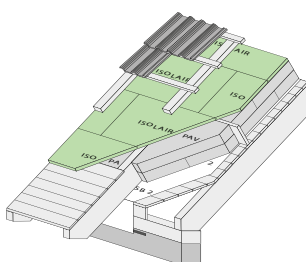
The boards are first fixed with galvanized roofing nails or staples. The final fixing is carried out by the load-bearing nailing, stapling or screwing of the counter battens.

Sarking for roofs with insulation between the rafters



The boards are first fixed with galvanized roofing nails or staples. The final fixing is carried out by the load-bearing nailing, stapling or screwing of the counter battens. The insulation boards must span at least two rafters.

Sarking for roofs with insulation above the rafters



There is no limitation on rafter spacing for roofs insulated with PAVATHERM woodfibre insulation boards above the rafters, since the ISOLAIR boards and PAVATHERM-PLUS insulation boards are fully supported. Laying in bond is practically free of cuts and the PAVATHERM-PLUS insulation board saves a complete work process. However, the fixing of the sarking boards and remaining insulation boards only takes place through secure fixing against uplift and shear loads to the counter battens to resist uplift and shear loads. Laying of the sarking boards should be followed by fixing the counter battens to secure the entire above-rafter insulation against wind uplift.



Insulation above rafters

In above-rafter insulation, the insulation is laid completely across the rafters and provides the highest quality insulation for your roof. Thanks to the uniformly thick, homogenous insulation layer above the rafters, thermal bridges are avoided and your roof receives seamless thermal, heat and noise protection without weak spots. The positive side effect is that the rafters only have to meet structural requirements.



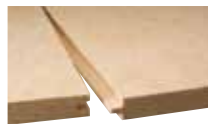
- ✓ For optimum thermal, heat, noise and fire protection.
- ✓ The complete insulation, sarking and airtight sealing system.
- ✓ Outstanding sound insulation thanks to fibrous board structure.
- ✓ High efficiency due to planned installation with minimal cutting.
- ✓ Permeable, but simultaneously airtight and windproof roof construction.
- ✓ Secure fixing technology with building authority-approved screws.
- ✓ Fire resistance class REI 45 with only 18 mm thick wood cladding.

With PAVATHERM-FORTE and ISOLAIR



In areas with higher snow loads, the construction and products used must withstand greater loads. PAVATHERM-FORTE and ISOLAIR are the optimum combination for this.

ISOLAIR



PAVATHERM-FORTE



PAVATEX DSB 2



For connections and sealing: PAVACOLL, PAVAPRIM, PAVABASE, PAVATAPE 20, PAVATAPE 75/150, PAVATAPE FLEX, PAVAFIX 60

With PAVATHERM and PAVATEX ADB



This construction shows the solution for above-rafter insulation protected by the vapour-open roofing underlay membrane PAVATEX ADB.

PAVATEX ADB



PAVATHERM



PAVATEX DSB 2



For connections and sealing: PAVACOLL, PAVATAPE 20, PAVAFIX 60, PAVAFIX SN BAND

The structure consists of rafters, which are visible within the building. The rafters can extend to the outside or terminate without overhang, flush with the external wall. Either timber sheathing or timber-based sheets are laid directly over the rafters as a substrate for the installation. The bottom version enables both formation of a canopy using sprocket and all-round insulation of the building shell.

1



Laying the PAVATEX DSB 2 roof sheathing roll

Lay the PAVATEX DSB 2 roof membrane directly on the roof boards and then install the sprocket, using a guide for the insulation if necessary.

2



Laying the PAVATEX insulation layer

Fit PAVATHERM or PAVATHERM-FORTE insulation boards between the sprocket. is bonded with offset joints in the case of multiple insulation layers.

3



Execution of canopy roof boards (sprocket)

The canopy roof boards are laid on the sprocket flush with the upper edge.

4



Laying the ISOLAIR boards

Beginning at the eaves, the ISOLAIR is laid in bond as the top layer. Fixing of the boards to the sprocket is carried out with staples or roofing nails to prevent sliding.

Laying PAVATEX ADB

Beginning at the eaves, the over-rafter insulation is covered with the PAVATEX ADB membrane.

5



Taping and fixing

Following completion of all necessary connection and sealing work (see PAVATEX sealing brochure for execution), the frost- and uplift-resistant fixing of the counter battens, including the PAVATEX insulation and insulation protection membranes is carried out.



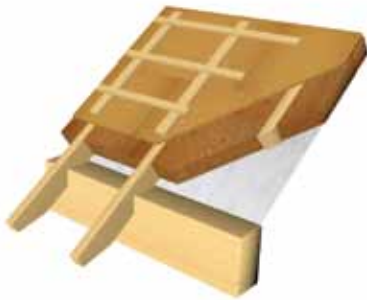
Insulation system between the rafters

The most commonly used form of roof insulation in sloping roofs is insulation between rafters. Here, the thermal insulation is precisely installed between the rafters. Ideally, an additional insulation layer of ISOLAIR or PAVATHERM-PLUS is to be laid above the rafters as a sarking to reduce thermal bridging in the rafter area.



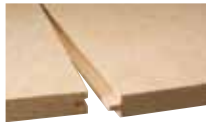
- ✓ Outstanding noise insulation, thanks to a fibrous board structure and the high density of the woodfibre insulation materials.
- ✓ High efficiency due to rational installation and little cutting with PAVAFLEX and PAVATHERM.
- ✓ Permeable, but simultaneously airtight and windproof roof construction.

With PAVAFLEX



Due to its flexibility and slump resistance PAVAFLEX is fast, easy and fits with little cutting between the construction.

ISOLAIR



PAVAFLEX



PAVATEX DB 3.5



For connections and sealing: PAVACOLL, PAVAPRIM, PAVABASE, PAVATAPE 75/150, PAVATAPE 20, PAVATAPE FLEX, PAVAFIX 60

With PAVATHERM



PAVATHERM offers exceptionally high sound and heat protection thanks to its fibrous structure and high density.

ISOLAIR



PAVATHERM



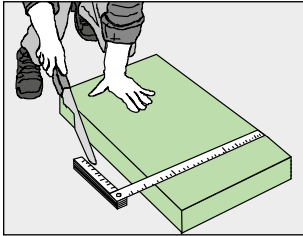
PAVATEX DB 3.5



For connections and sealing: PAVACOLL, PAVAPRIM, PAVABASE, PAVATAPE 75/150, PAVATAPE 20, PAVATAPE FLEX, PAVAFIX 60

Processing PAVAFLEX and PAVATHERM

1

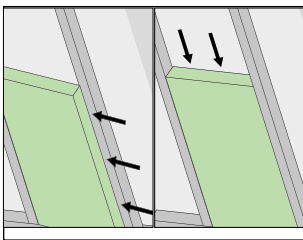


Cutting PAVAFLEX and PAVATHERM

Cut PAVATHERM with the insulation blade for jigsaws, a hand-held circular saw or a table saw.

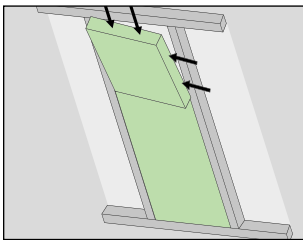
Similarly, PAVAFLEX insulation boards are cut with an insulation knife, reciprocating saw or bandsaw.

2



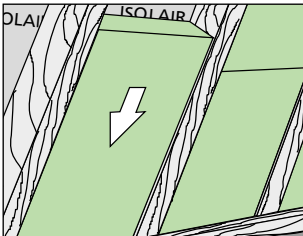
Placing PAVAFLEX

Vertically and horizontally oversized PAVAFLEX is installed between the rafters. The PAVAFLEX insulation board is squeezed in vertically between the rafters and pushed into the cavity with light pressure.



The top PAVAFLEX insulation board is similarly cut oversize and squeezed in. With multiple insulation layers, attention must be paid to offset joints. Thanks to flexibility and the resulting clamping effect, PAVAFLEX fits spaces up to 900 mm in the structure, quickly, easily and without gaps.

3

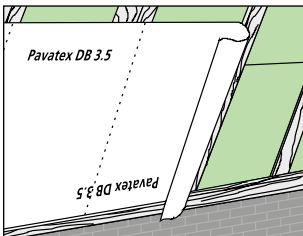


Laying PAVATHERM

Push the cut insulation boards tightly between the rafters, secure against falling out, if necessary. Multiple insulation layers are installed with offset joints.

With clear rafter spacing over 60 cm, the cut-offs can be progressively installed in the subsequent rows of boards.

4



Installation of the airtight layer

Before installation of the internal cladding, the insulated roof area is covered with an airtight, vapour-control membrane (e.g. PAVATEX DB 3.5 or DB 28), which is stapled to the rafters. All membrane overlaps, connections and penetrations must be made airtight by taping with PAVATEX sealing products (e.g. PAVAFIX 60).

Clamping widths and cutting dimensions for PAVAFLEX

If PAVAFLEX is used as supplementary insulation over existing roof insulation in a renovation, the requirements for maximum clamping widths are not applicable. Depending upon structure, cavity characteristics and when placing without cutting, the values can be deviated from slightly and should be adapted to on-site conditions.

Board thicknesses	Max. clamping width	Excess
40 - 50 mm	400 mm	4 mm
60 mm	500 mm	6 mm
80 mm	700 mm	10 mm
100 mm	800 mm	10 mm
120 - 240 mm	900 mm	10 mm



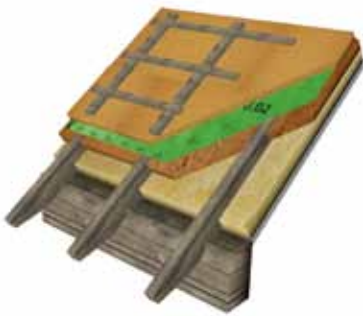
Roof renovation system from outside

Usually, with renovation of a roof from the outside, the existing insulation must be removed and then an airtight layer must be looped over and between the rafters - a complicated process. With LDB 0.02, PAVATEX is the first manufacturer to offer an airtight membrane above the rafters that ensures a secure, airtight closure at the roof. The combination of PAVAFLEX between the rafters and PAVATHERM-PLUS as a sarking is an extremely efficient and cost-effective system.



- ✓ The existing, old insulation material can usually remain in the structure after inspection – removal and disposal costs are eliminated.
- ✓ A cost-effective and efficient system, thanks to easy, level placement above the rafters.
- ✓ PAVATEX LDB 0.02 ensures immediate drainage and may be exposed to the weather for up to 7 days when mechanically fixed.
- ✓ The entire system with sarking board can be exposed to the weather for up to 3 months.
- ✓ A perfectly coordinated renovation system: All system components come from a single source for greater certainty.

With PAVATHERM-PLUS

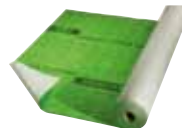


With the combination of PAVAFLEX, PAVATEX LDB 0.02 and PAVATHERM-PLUS you get a vapour permeable roof section, which regulates the entire moisture balance in the construction.

PAVATHERM-PLUS



PAVATEX LDB 0.02



PAVAFLEX



For connections and sealing: PAVACOLL, PAVAPRIM, PAVABASE, PAVATAPE 75/150, PAVATAPE 20, PAVATAPE FLEX, PAVAFIX 60

Processing

1



PAVAFLEX insulation between the rafters

The functional efficiency of the existing insulation material must be checked. If it remains in the structure, PAVAFLEX is added, without voids, up to the top edge of the rafters and ventilation openings in the space between the rafters must be sealed permanently.

2



Laying PAVATEX LDB 0.02 airtight membrane

Next, laying of PAVATEX LDB 0.02 flat across the rafters. All connection work must be carried out in accordance with the PAVATEX sealing brochure.

3

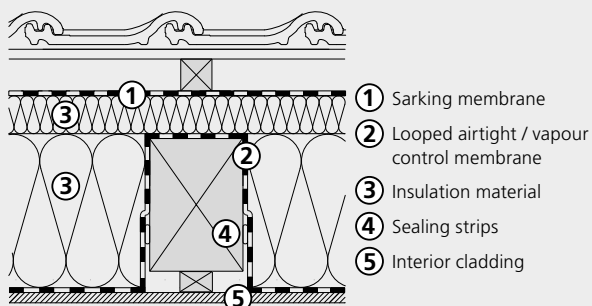


Laying of PAVATHERM-PLUS insulation boards

The closure of the structure is done by proven, permeable PAVATHERM-PLUS insulation boards. Tightly bonded, they fulfil the function of sarking permanently and securely.

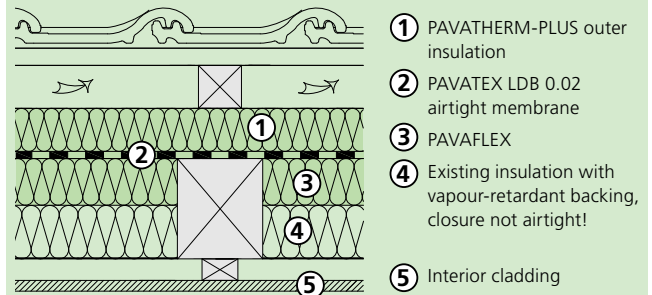
Standard solution

The airtight vapour-control layer is normally installed in loops with airtight closure in the lower rafter area. **However, this solution is not always easy to carry out in practice.**



PAVATEX system solution

The airtight membrane PAVATEX LDB 0.02 is arranged above the rafters, thus providing an efficient and secure option.





Roof renovation system from inside

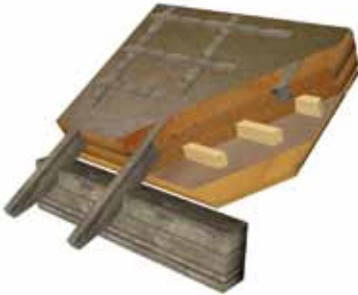
With the roof insulation from the inside option, every requirement for an old building's roof can be satisfied. With the PAVATEX internal roof renovation system, you can easily improve your roof to a level that corresponds to currently-required standards for new construction.

- ✓ Improved thermal protection.
- ✓ Lower energy consumption.
- ✓ Increased value / preservation of value.
- ✓ Increased quality of life and comfort.
- ✓ Contribution to environmental protection.



With PAVATHERM-PROFIL

The plaster bearing insulating fibreboard PAVATHERM-PROFIL for additional internal roof insulation allows creative internal finishes.



PAVAFLEX



PAVATEX DB 28



PAVATHERM-PROFIL



For connections and sealing: PAVACOLL, PAVAFIX 60, PAVATAPE 20, PAVATAPE FLEX, PAVAFIX 60

Processing

For combined insulation between and below rafters using PAVAFLEX and PAVATHERM-PROFIL, attention must basically be paid to the following:

- ▶ If the existing sarking is permeable, the insulation can be carried out as full rafter-deep insulation.
- ▶ For impermeable membranes, sheathing or sarking, effective ventilation must be created as an additional measure.

1



PAVAFLEX between and possibly under the rafters

If insulation already exists between the rafters and is intact, it can stay in place. Otherwise, the space between the rafters is completely insulated with void-free PAVAFLEX.

2



Installation of substructure

In addition, a substructure can be installed at right angles to the axis of the rafters with flexible PAVAFLEX woodfibre insulation material between them.

3



Installation of the PAVATEX DB 28 vapour control membrane

Depending on the construction layout, an additional vapour control membrane such as PAVATEX DB 28 should be installed on the underside of the rafters or new substructure.

4



Installation of PAVATHERM-PROFIL

Next, PAVATHERM-PROFIL insulation boards are mounted on the substructure and fixed appropriately.

A permeable red chalk or clay-based mineral plaster forms the internal closure.



Flat roof insulation

Flat roofs are considered unique for good reason. On one hand, unlimited design possibilities and on the other high, very specific requirements for insulation and sealing. A flat roof insulation solution serves in the insulation of all low-incline roofs with slopes between 2° and 5°.



- ✓ High insulation effect for efficient energy-saving.
- ✓ Outstanding summer heat protection thanks to high thermal storage.
- ✓ Loadbearing and dimensionally stable board structure.
- ✓ Noticeably improved sound insulation, thanks to fibrous board structure and high density.
- ✓ Vapour permeable and hygroscopic for a more pleasant living environment.

Ventilated flat roof construction with ISOLAIR and PAVAFLEX

In ventilated flat roof construction, the moisture from the building diffused through the ceiling is removed by ventilation beneath the roof membrane.



PAVATEX ADB



ISOLAIR



PAVAFLEX



PAVATEX DB 3.5



For connections and sealing: PAVACOLL, PAVATAPE 20, PAVATAPE FLEX, PAVAFIX 60, PAVAFIX SN BAND

Unventilated on-roof insulation with PAVATHERM-FORTE

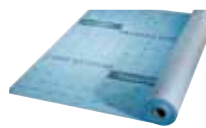
In unventilated flat roof construction, all necessary building component layers are directly connected to each other. It is essential that the flat roof sealing is placed directly on top of the thermal insulation.



PAVATHERM-FORTE



PAVATEX DSB 2



For connections and sealing: PAVACOLL, PAVATAPE 20, PAVATAPE FLEX, PAVAFIX 60

Ventilated flat roof construction

1



Insulation of the roof substructure

The primary roof construction for double layer flat roofs corresponds to the assembly of insulation systems between rafters. First, the permeable PAVATEX ADB covering membrane is laid over the ISOLAIR boards for protection of the load-bearing structure and blocking of incidental secondary moisture.

2



Assembly of the outer shell

In a second step, the outer shell of the roof, which can also allow walking access or receive a green roof as needed, is assembled.

Unventilated on-roof insulation

1



Laying the PAVATEX DSB 2 roof membrane

In the first step, the roof membrane is laid on the roof boards.

2



Laying PAVATHERM-FORTE insulation boards

Finally, the PAVATHERM-FORTE insulation boards are laid & jointed together. Multiple insulation layers must be laid with offset joints.

A corresponding roof seal forms the outer closure of the roof system.



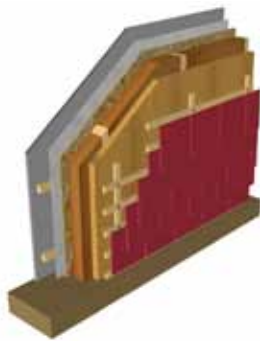
External wall insulation in timber construction

For external walls in timber construction, the weather protection that is formed by the actual façade and the moisture control layer behind it, take on special importance. For ventilated and rendered facades, PAVATEX offers insulation systems optimally adapted to the needs of timber construction.



- ✓ Complete system consisting of insulation, weather protection and windproofing.
- ✓ Outstanding sound insulation thanks to fibrous board structure and high insulation mass.
- ✓ For a building shell free of thermal bridges.
- ✓ Permeable but simultaneously airtight and windproof wall construction.
- ✓ Fire resistance class up to F 90-B and REI 90, respectively.

Curtain wall facade with PAVATHERM-PLUS



PAVATHERM-PLUS is a complete system of insulation, weather protection and windproofing and forms the optimum protective shell for clad facades.

PAVATHERM-PLUS



PAVAFLEX

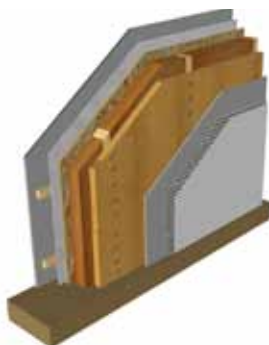


PAVATEX DB 3.5



For connections and sealing: PAVACOLL, PAVAPRIM, PAVABASE, PAVATAPE 75/150, PAVATAPE 20, PAVATAPE FLEX, PAVAFIX 60

Rendered facade with DIFFUTHERM



The DIFFUTHERM insulating board for ETICS in timber construction offers creative freedom with the render coating.

DIFFUTHERM



PAVAFLEX



PAVATEX DB 3.5



For connections and sealing: PAVACOLL, PAVATAPE 20, PAVATAPE FLEX, PAVAFIX 60

Processing

1



PAVAFLEX insulation

The voids in the timber frame construction are insulated with PAVAFLEX. See "Between rafter insulation system" chapter for installation information.

2



Installation of the PAVATEX DB 3.5 vapour control membrane

The PAVATEX DB 3.5 vapour control membrane is installed internally. Installation and all connection work must be carried out in accordance with the PAVATEX sealing brochure.

3



Installation of the insulation boards

PAVATHERM-PLUS or DIFFUTHERM is installed on the outside of the external wall studs. Either insulation anchors or wide crown staples may be used for fixing.

4



Installation of the clad facade or external render system

The wall insulated with PAVATHERM-PLUS is clad with a facade system in wood, stone, sheet metal or similar. DIFFUTHERM must be rendered with a mineral-based render system. Attention must be paid to the application details of the relevant rendering contractors.

Facade insulation systems on flat sub-structures

Facade insulation systems on flat substructures apply to new and old buildings in solid timber and masonry construction. PAVATEX offers multilayered insulation systems for both classic timber construction with double timber frame construction and with PAVAWALL.

- ✓ Complete system consisting of insulation, weather protection and wind-proofing.
- ✓ Cost and time savings in renovation, as the old facade can remain completely intact.
- ✓ Outstanding sound insulation, because there is no resonance developed in the insulation layer.



Timber frame construction system with PAVAFLEX and DIFFUTHERM



The timber frame construction system with PAVAFLEX and DIFFUTHERM enables insulation of masonry and solid wood structures in classic timber construction.

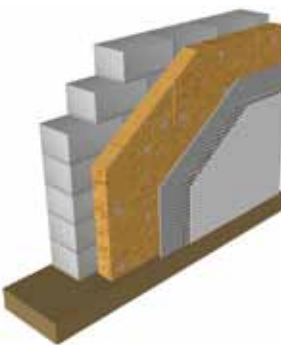
DIFFUTHERM



PAVAFLEX



Compact system with PAVAWALL



In the PAVAWALL compact system, the insulation is glued to the substructure in a single layer and, in addition, then fixed using special insulation anchors.

PAVAWALL



Installing PAVAFLEX and PAVATHERM

1



Mounting of the substructure

In the first step, installation is carried out directly on the external wall. In renovation of buildings with rendered external thermal insulation, the existing old facade can remain entirely intact and the new timber frame structure can be built directly onto it.

2



PAVAFLEX insulation

Next, the spaces in the substructure are insulated by filling with void-free PAVAFLEX.

3



DIFFUTHERM insulation

The DIFFUTHERM insulation boards can be fixed directly to the studs. Finally, the DIFFUTHERM is rendered in accordance with the render manufacturer's specifications. A mineral-based render system consisting of base coat, reinforcement mesh and finish render must be used.

Processing PAVAWALL

1



Bonding of PAVAWALL insulation

Before beginning work, ensure that the substructure is able to take a load, and is dry and free of grease and dust. Apply adhesive to one side of the PAVAWALL insulation boards in the form of a bead around the edges and in the centre in accordance with the requirements of the system provider, and press against the facade.

2



Control of dimensional accuracy

During board installation, the facade must be constantly checked for deviations from plumb.

3



Fixing of the boards

In addition to bonding, the PAVAWALL insulation boards must be fixed mechanically. Special insulation anchors suitable for the substructure must be used. Finally, the PAVAWALL is rendered in accordance with the render manufacturer's specifications. A mineral-based render system consisting of base coat, reinforcement mesh and finish render must be used.



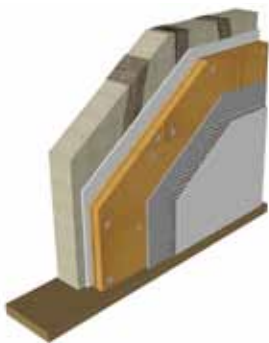
Internal wall insulation

Wherever external facade insulation cannot be carried out, internal wall insulation is appropriate. The PAVADENTRO insulation board was specially developed for internal renovation of old buildings. It reduces moisture formation in existing building components to a minimum and provides a comfortable internal environment.

- ✓ The external facade remains visible.
- ✓ Breathable, permeable construction.
- ✓ Comfortable internal environment.
- ✓ Controls the moisture balance.
- ✓ Handy one-man board for renovation.



With PAVADENTRO



PAVADENTRO is the unique internal wall insulation and contains a specially developed mineral function layer for controlled moisture transfer.

PAVADENTRO



Processing

1



Equalisation / adhesive coating

Where the wall is out of true by more than 8 mm, a levelling coat such as red chalk must be applied to the wall and allowed to dry completely before further work. At unevenness of less than 8 mm, the PAVADENTRO board is bonded directly to the prepared substructure by means of a level, capillary active adhesive coating.

2



Installation of PAVADENTRO insulation boards

It is essential that the adhesive coating be placed between the solid wall construction and the insulation board. The adhesive coating is applied to the entire surface of the PAVADENTRO board and gently rubbed in, and the board is then bonded to the dry wall or levelling layer.

3



Fixing PAVADENTRO insulation boards

Additional fixing of the boards takes place immediately, while the adhesive coat is still damp, or only after the adhesive coat has set. On masonry substructures, this is carried out with at least three fixing anchors for masonry (insulation plate anchors) per board.

4



Plaster coating with mineral-based internal plaster

Finally, the PAVADENTRO insulation boards are plastered with a mineral-based internal plaster system using, for example, red chalk or clay, in accordance with the plaster manufacturer's specifications.



Floor insulation in new construction

The floor is a building element that is subject to airborne and impact noise every day. Pressure-resistant woodfibre insulation boards for thermal insulation under screeds, mastic asphalt, dry screeds or other floor coverings provide peace and comfort.

- ✓ High insulation against airborne noise for greater peace.
- ✓ Proven system assemblies including those for heavy loads and limited ceiling heights.
- ✓ Tested constructions with specification of loading capacities.

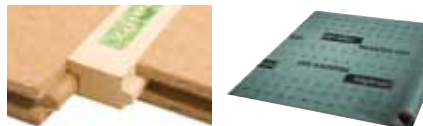


With PAVATHERM-PROFIL

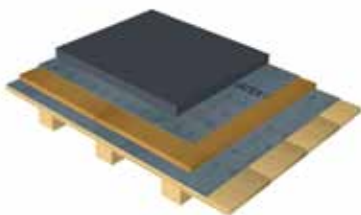


PAVATHERM-PROFIL in combination with the special PAVATEX joint strips provides the ideal insulation system for solid hall floors and ensures the finest thermal and noise protection.

PAVATHERM-PROFIL PAVATEX RSP



With PAVAPOR



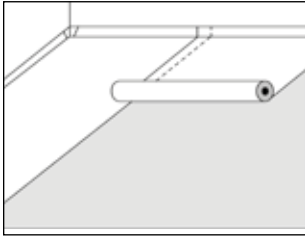
PAVAPOR offers high load capacity and outstanding impact noise insulation for screeded floor coverings.

PAVATEX RSP PAVAPOR



Installing PAVATHERM-PROFIL

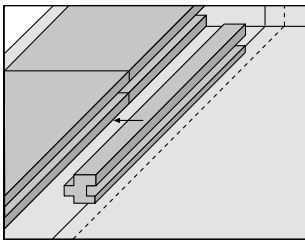
1



PAVATEX RSP

Lay PAVATEX RSP as a moisture barrier and connect it to the horizontal barrier at the base of the external wall. In the case of basement ceilings, the substructure must be dry. PAVATEX RSP is laid with 15 cm overlaps and bonding of the overlaps is not necessary.

2

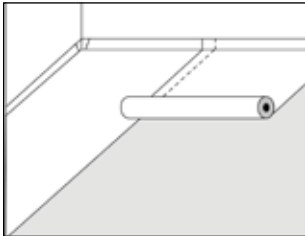


Laying PAVATHERM-PROFIL

The laying of the insulation system begins along a wall of the room with a first row of panels, which have been halved lengthwise. Next, the NK joint strips are inserted in the profiled insulation boards, while in the longitudinal direction, a distance of at least 2 to 3 mm needs to be observed. Lay then next row PAVATHERM-PROFIL.

Installing PAVAPOR

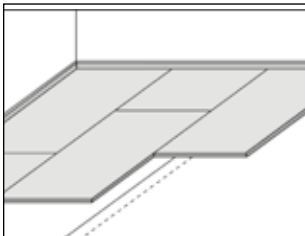
1



PAVATEX RSP

Lay PAVATEX RSP as a moisture barrier and connect it to the horizontal barrier at the base of the external wall. In the case of basement ceilings, the substructure must be dry. PAVATEX RSP is laid with 15 cm overlaps and bonding of the overlaps is not necessary.

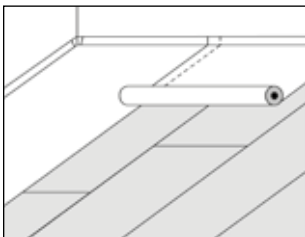
2



Laying PAVAPOR

Lay PAVAPOR impact sound insulation boards with tight joints. To avoid sound bridges, edging strips must be placed along peripheral building elements.

3



PAVATEX RSP

Install PAVATEX RSP directly on the upper insulation level, creating a separation layer. PAVATEX RSP is laid with 15 cm overlaps and bonding of the overlaps is not necessary. Then, any common wet screed can be laid.



Floor insulation in renovations

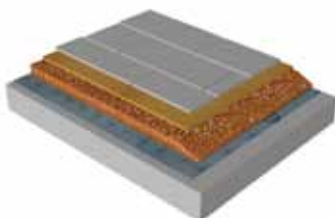
With the correct floor insulation products, the floor can be effectively insulated against both heat loss and impact sound. In addition, insulation of the floor can also achieve a levelling of heights when the substructure is uneven. Good floor insulation saves energy and simultaneously creates a pleasant feeling for the occupants, thanks to the warmer floor and balanced indoor environment.



- ✓ Levelling of substructure unevenness and covering of installation levels thanks to PAVAPLANUM.
- ✓ Optimum substructure for all dry screeds (e.g. gypsum fibre panels).
- ✓ Very high compressive strength of the overall construction.
- ✓ High insulation against transfer of airborne and impact noise.

With PAVAPLANUM and PAVASTEP

Thanks to its heavy weight PAVAPLANUM improves the sound and the vibration behaviour of floors. It is extremely resistant to pressure and very easy to handle and is used on all different types of surfaces.



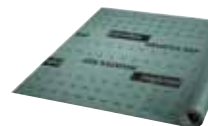
PAVASTEP



PAVAPLANUM

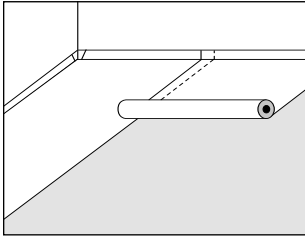


PAVATEX RSP



Processing

1



PAVATEX RSP

Lay PAVATEX RSP as a moisture barrier or trickle protection, and connect it to the horizontal barrier at the base of the external wall. In the case of basement ceilings, the substructure must be dry. PAVATEX RSP is laid with 15 cm overlaps and bonding of the overlaps is not necessary.

2



PAVAPLANUM

Distribute PAVAPLANUM evenly with the installation depth between 10 and 80 mm. Mechanical compacting is not necessary. If the slope of the floor is more than 2% (2 cm in 1 m), then use of a binding medium such as cement is required, especially on timber beam decks.

3



PAVASTEPP

Proceed to lay PAVASTEPP over the level PAVAPLANUM surface in accordance with the appropriate installation information.



Top floor ceiling insulation

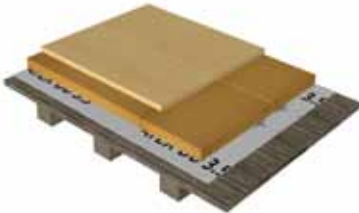
Insulation of the top floor ceiling to unusable, unheated attic spaces is among the most beneficial thermal protection measures. If the roof slope were insulated, the unused attic would also be heated. This costs wasted energy. If the attic has not been finished, the top floor ceiling should be insulated, and not the roof slope.

- ✓ High insulation against heating energy losses in winter and overheating in summer.
- ✓ Various details for different load requirements.
- ✓ Application as cavity insulation or insulation lining in old and new buildings.



With PAVATHERM

PAVATHERM provides all-round protection against cold, heat, noise and fire hazards. The diffusion-open construction is long-lasting and ensures outstanding comfort and a healthy indoor climate.



PAVATHERM



PAVATEX DB 3.5



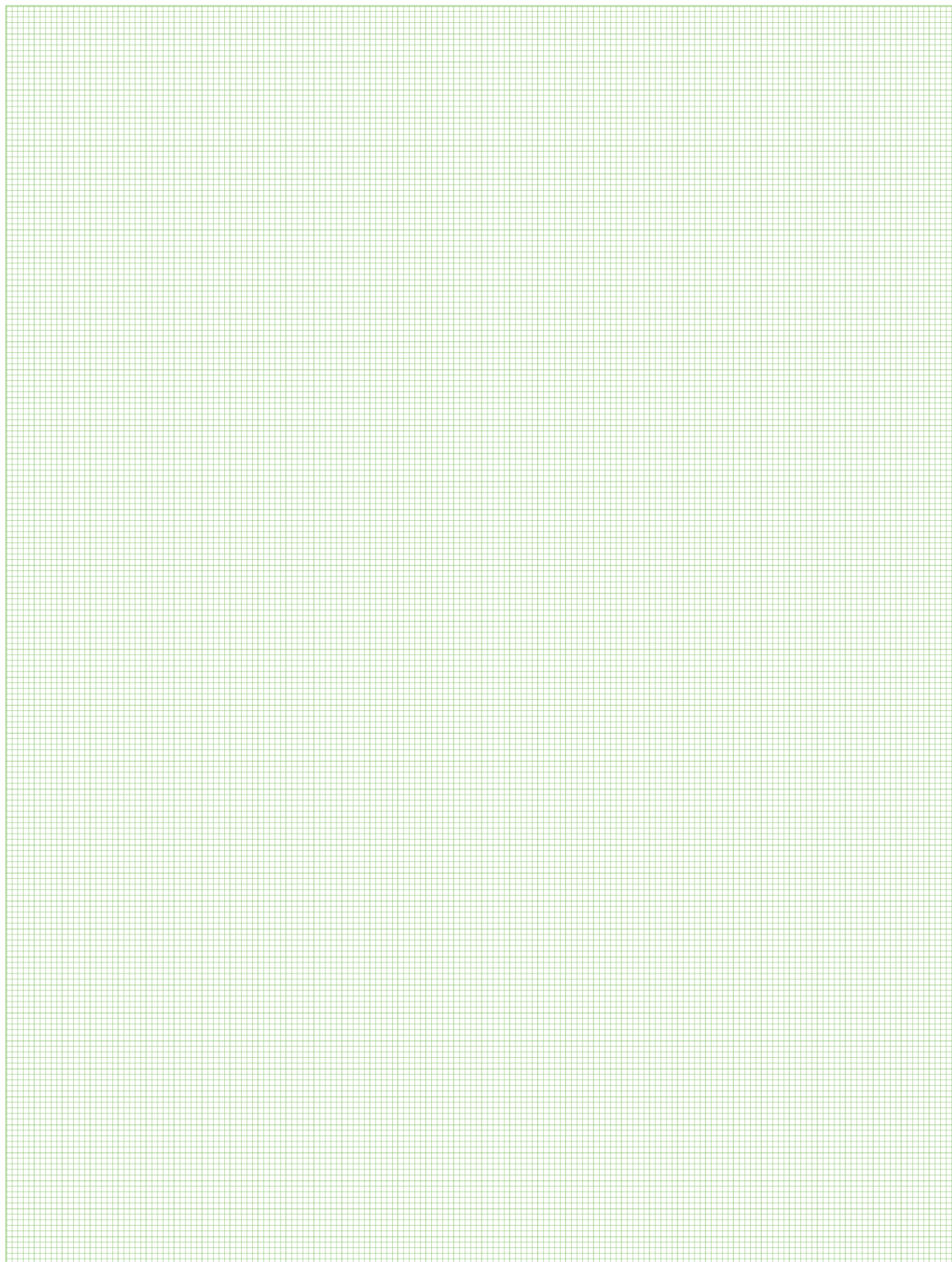
Processing

1**PAVATEX DB 3.5 vapour control**

In the first step, the PAVATEX DB 3.5 vapour control membrane is laid on the floor over the top floor ceiling, bonded airtight and connected. Laying and all connection work must be carried out in accordance with the PAVATEX sealing brochure.

2**Laying PAVATHERM**

Next, the PAVATHERM insulation boards are laid together tightly. Multiple insulation layers must be carried out with offset joints.



System guarantee-durable and sound

The high-performance fixing and adhesive components of PAVATEX system solutions ensure lasting, secure integrity in modern, multifunctional building shells – now also guaranteed by the new PAVATEX warranty.

In the event of damage, it offers extensive service support, thus further increasing security for designers, processors and building owners.



Multiple services

The new PAVATEX warranty applies to all sealing solutions throughout the building shell – even in technically demanding situations. PAVATEX thus ensures replacement of all PAVATEX building materials used and takes over all costs for the transport and exchange of the materials in the event of damage. In addition, this includes the necessary removal of all building element layers and their restoration.

Guaranteed tightness

The warranty covers bonding in accordance with the following PAVATEX application matrix. The precondition for this is the installation and use of PAVATEX products and their adhesive technology in accordance with each of the currently applicable installation guidelines in the technical documentation and up to date technology at the time of installation.

Insulate vapour-permeably and build airtight - PAVATEX insulation systems do this.

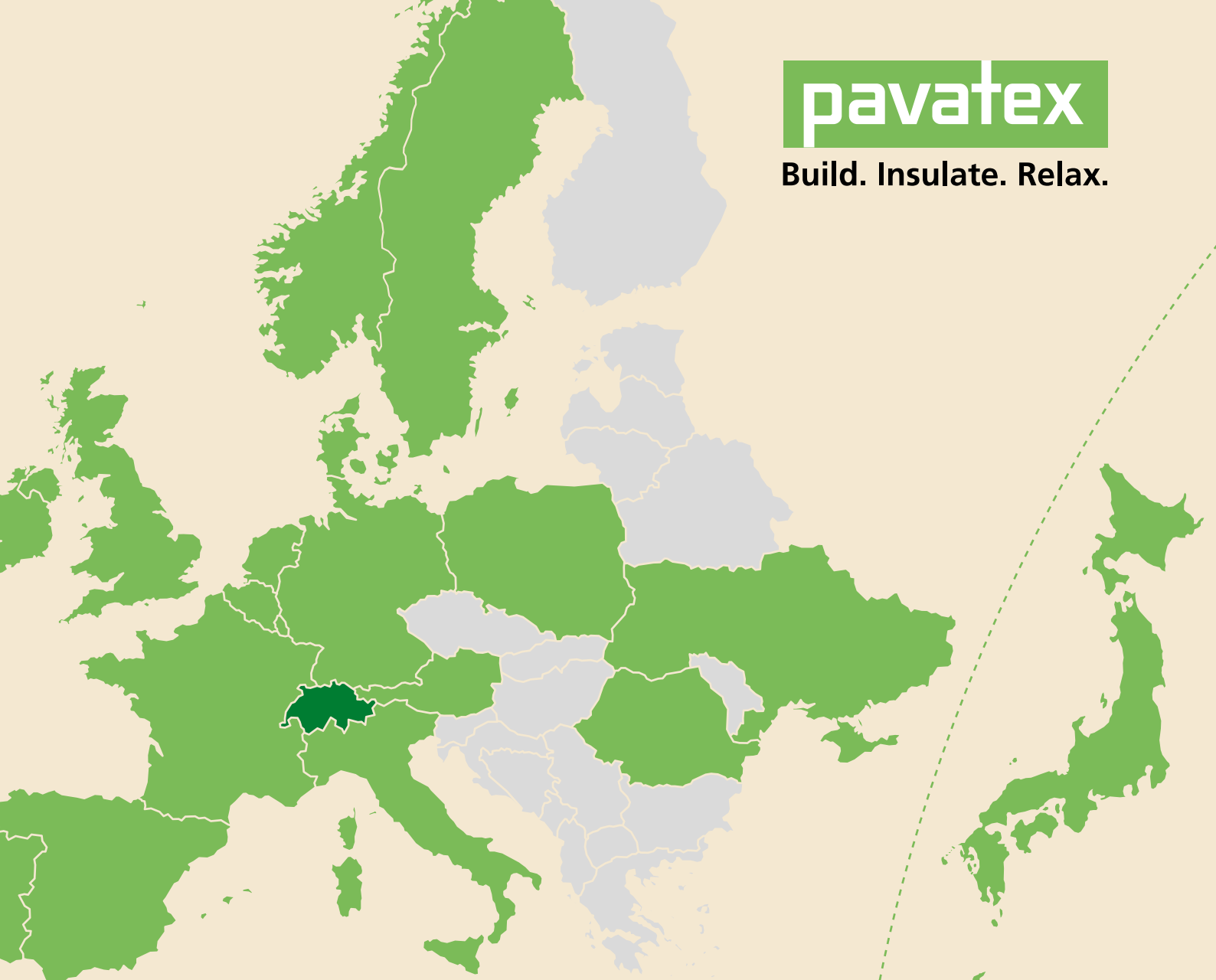
Warranty exclusion

The warranty lapses:

- if changes or repairs are made to the supplied products that have not been authorized by PAVATEX.
- if defects arise in which appropriate measures to minimize damage are not undertaken immediately.
- if defects are attributable to mistakes or damage to other construction elements, improper handling before, during or following installation or force majeure.
- if system components or construction products are installed despite recognizable defects.
- in the event of use of products that do not originate from PAVATEX.
- in the case of damage resulting from improper maintenance, failure to observe processing guidelines, improper storage or processing, excessive loading and unsuitable equipment.

pavatex

Build. Insulate. Relax.



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