

1 Initial situation



Insulation is installed between the rafters. Semi-rigid mat insulation material is being used in this case. For optimum insulation performance it is important to ensure that there are no gaps between the insulation mats and the supporting rafters.

Outside the insulation, an insulation protection layer (e.g. pro clima SOLITEX UD/PLUS, wood fibre board or roof lining on wooden planking) should be attached to the rafters to provide wind-proofing. It ensures that cold air does not pass through the thermal insulation and gives optimum insulation.

During colder months, the vapour check and airtightness layer must be fitted and secured immediately after installation of the thermal insulation.

Note on blown insulation:
The insulation material should be inserted directly after completion of the airtightness layer with INTELLO PLUS.

2 Fixing the membranes



The INTELLO vapour check and airtightness membrane is laid on the interior, beneath the insulation. Bonding with adhesive tapes should be on the smooth printed side. Staples should be 10 mm wide and 8 mm long and set at a max. distance of 10-15 cm.



INTELLO
Intelligent vapour check and airtightness membrane with humidity-variable diffusion resistance for active moisture management.

Note on blown insulation:
With blown insulation systems, INTELLO PLUS should be used. The max. staple spacing is then 5-10 cm.



INTELLO can be unrolled and stapled either lengthwise or crosswise to the rafters. It should be laid as far as possible without creasing.

The lengthwise technique has the advantage that the membranes are overlapped on a solid basis (rafters or similar).

The crosswise fitting is shown here. With this technique there is usually less waste. For sealing later it is important to extend the vapour check approx. 3 cm onto the gable wall or jamb wall and fasten if possible using staples. This joint is sealed airtightly later.

3 Overlap the membranes



Once the first membrane is in place, the second layer is fitted. The membrane may overlap by about 10 cm. The printed markings are an aid to orientation.

4 Preparation



Surfaces should be brushed down before bonding. Dust should be vacuum cleaned or wiped with a cloth.

All surfaces must be suitable for permanent, airtight adhesion with airtightness tape and joint adhesive, and must be stable, dry, smooth and free of dust, silicone and grease.

Adhesion to frozen surfaces is not possible. When it comes to protecting the structure, the best results can be achieved with high-quality vapour checks and airtightness membranes and timber derived sheathing. In case of doubt, adhesion tests should be carried out.

5 Seal



Once the vapour check is fitted, it has to be sealed. The membranes should be sealed at overlaps without strain or loading, using TESCON No.1 adhesive tape. Creases in the overlap area must not be over-taped; they must be cut off and re-sealed. The tape should be applied centrally and pressed down firmly using, for example, pro clima PRESSFIX.



6 Jamb wall



Just as important as the sealing of overlaps are joints to adjacent structural components. TESCON No.1 is used for joints to smooth, non-mineral structural components (such as this jamb wall made of OSB panels). Gable walls are treated similarly.



TESCON No.1
Multi-purpose adhesive tape for sealing membrane overlaps.

PRESSFIX
The Handy-Tool for a reliable Bond



The joint adhesive ORCON F is applied to adjacent mineral structural components (e.g. plastered walls or rough timber) with a continuous bead of approx. 5 mm thick ORCON F. With rough surfaces, increase the bead size as required. Glue the vapour check, with an expansion joint, to the adhesive bead. To allow for movement, do not press the glue completely flat. Pressure laths are usually not required on stable surfaces.



ORCON F
Multi-purpose joint adhesive in cartridge or tubular film. For joints to adjacent mineral or rough structural components

continue with steps 7-12 p.t.o.

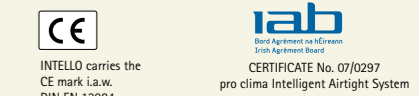


COMPOSITION

The high-performance vapour checks INTELLO and INTELLO PLUS are made from 100 % polyolefins – the special membrane from a polyethylene copolymer, the fleece and reinforcement fabric (in INTELLO PLUS) from polypropylene. This allows for easy recycling.

TERMS AND CONDITIONS

The joints must not be systematically or intentionally subjected to strain. When the vapour check membrane is sealed, the weight of the insulating material must be borne by lathing. Adhesion should be supported by battens if necessary. Press firmly to secure the adhesive tape. Ensure there is sufficient back-pressure. Airtight seals can only be achieved on vapour check membranes that have been laid without folds or creases. Ventilate regularly to prevent build-up of excessive humidity. Use a dryer if necessary. The information provided here is based on practical experience and the current state of knowledge. We reserve the right to make changes to the recommendations given or to make alterations due to technical developments and associated improvements in the quality of our products. We would be happy to inform you of the current technical state of the art at the time you use our products.



Further information about application and construction is given in the pro clima planning documentation. (Please also take note of the sealing recommendations contained in the current pro clima application matrix.)

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s_d-value:	Humidity variable, 0,25 to > 10 m
Fire class	E
Temperature resistance	Long-lasting from -40°C to +80°C
Delivery form:	Length: 20 and 50 m, width: 1,50 m and 3,00 m

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www.proclima.com
...and the insulation is perfect



7 Gable (plastered) Gable (unplastered)



For joints to plastered gable walls, a continuous bead of approx. 5 mm thick ORCON F multi-purpose joint adhesive should be applied from the cartridge. With rough surfaces, increase the bead size as required.

Glue the vapour check and include an expansion joint. Adhere to adhesive bead. To allow for movement of the parts, do not press the glue completely flat. Pressure laths are usually not required on stable surfaces.



For masonry which has yet to be plastered, the plaster sealing tape CONTEGA PV gives a secure, airtight transition. The tape is first attached to the smooth side of the vapour check using its self-adhesive strips.

CONTEGA PV
Plaster sealing tape for secure, long-lasting joints to surfaces that will be plastered.



The white airtight fleece with the integrated blue plaster reinforcement mesh is then pushed back and fixed as far as possible into the corner, using a few dabs of ORCON F adhesive on the masonry.



If the wall is subsequently plastered, then CONTEGA PV should be embedded in the middle layer of the plaster. To do this, push back the fleece and reinforcement, apply plaster to the wall behind CONTEGA PV, lay the fleece and reinforcement in the fresh layer of plaster and then complete the plaster work. Finished. Plasters containing gypsum have a sufficient adhesive strength. With cement, chalk or loam plasters, please use a reinforcement layer.

8 Roof beam



ORCON F joint adhesive is used at rough timber, rafters, purlins or other roof timbers. Apply ORCON F in an approx. 5 mm thick adhesive bead. With rough surfaces, increase the bead size as required.



Lay the vapour check (if possible) with an expansion joint in the adhesive bed. Do not press the adhesive completely flat.

9 Chimney



For connections to insulated, double-layer chimneys, apply approx. 3 cm of INTELLO to the chimney. Apply an approx. 5 mm thick adhesive bead (more if necessary) with ORCON F and lay the membrane, with an expansion joint, in the adhesive bed. Do not press the adhesive completely flat.



Seal the corners with short pieces of TESCON No.1. In the centre of the adhesive tape, cut halfway through. Then it is easy to shape.

10 Pipe and cable



If pipes or cables penetrate the airtightness layer, they too must be securely sealed. The most suitable means of doing this is with airtightness grummetts made from EPDM. This flexible material allows a tight fit, and KAFLEX is available in all common diameters. Cable grummetts have a self-adhesive. Remove the release paper, push over the cable and stick on. ROFLEX Pipe grummetts are affixed using TESCON No.1. Press firmly to secure the adhesive tape.



KAFLEX and ROFLEX Cable/pipe grummetts: Secure feed-through of cables and pipes

11 Corner sealing



The airtightness of angled joints is also important. Sealing is simplified with the corner adhesive tape TESCON PROFIL. It features three release paper strips. This allows you to "activate" a single part of the adhesive surface and to seal corners junction by junction.



In the second step, simply remove the rest of the release paper and finish sealing.



TESCON PROFIL Multi-purpose corner tape for windows, doors and corner joints..

12 Completion



Cross-battens with a max. spacing of 50 cm should hold the weight of the insulation. An interior lining protects the membranes from damage and UV light.



Once all joints have been sealed, it is advisable to check the airtightness using a BLOWER DOOR or a pro clima WINCON test unit.

Note on blown insulation: With blown insulation materials or insulation materials that tend to sag heavily, an additional supporting lath should be placed on the connections between the membrane overlaps.

Application Guide



APPLICATION

pro clima high-performance system for creating secure vapour check and airtightness layers according to DIN 4108, SIA 180 and Norm B8110-2. Perfect protection for thermal insulation against structural damage and mould. This extremely high level of security is achieved by the humidity-variable diffusion resistance of the membrane - even in structurally challenging buildings.

ADVANTAGES

- ✓ Outstanding protection against structural damage and mould.
- ✓ For pitched roofs, flat roofs, walls, ceilings, and floors.
- ✓ Easy to apply, no splicing or tear propagation.
- ✓ Complete airtightness system with all necessary adhesive agents.



CERTIFICATE No. 07/0297 pro clima Intelligent Airtight System

All information step by step →

www.proclima.com

...and the insulation is perfect

