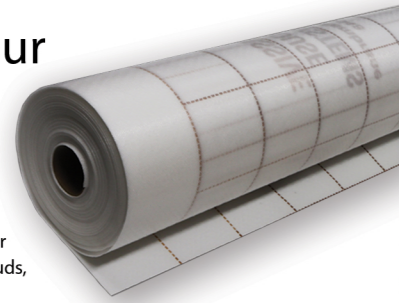


## PHS Apollo 1.5 Vapour Control Membrane



### Application

- The membrane should be applied perpendicular to the direction of the application surface i.e. studs, rafters and joists.
- The membrane should be fixed with staples every 150mm or with PHS Double Sided Tape.
- It is recommended to use PHS Argo Joining Tape for bonding barrier overlaps, penetrations and repair spots.
- For connections to concrete or masonry PHS Internal Adhesive Sealant is recommended.
- Ensure there is a 100mm overlap of the membranes and tape with PHS Argo Joining Tape.

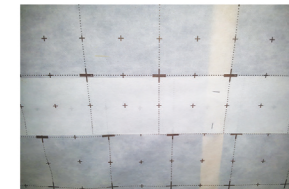


Fig 5.0 100mm overlaps before sealing overlaps



Fig 5.1 Sealing the membrane to masonry



Fig 5.2 Stapling the membrane to timber

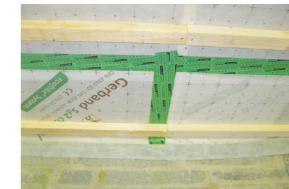


Fig 5.3 Gerband 586 sealing membrane overlaps

### Fitting Instructions:

- 1 The Sd membrane is applied to the building envelope on the warm side of the insulation.
- 2 The membrane should be rolled out to the correct length and cut with a sharp knife.
- 3 The membrane should be applied to the timbers cross-wise to the joists/rafters, with the graphics facing the installer. PHS Double Sided Tape at 400-600mm centers should be used, otherwise staple every 150-200mm.
- 4 Creases should be removed and reasonable tension applied to the membrane.
- 5 The membrane should overlap by approx. 100mm, the membrane graphics facilitate this process. See Fig 5.0
- 6 The membrane should be extended approx. 100mm down the external wall without any stress on the material.
- 7 A 6-8mm bead of PHS Ottello Sealant should be applied to the masonry surfaces to fix the membrane. See Fig 5.1
- 8 Gently press the membrane against the Sealant and allow to dry.
- 9 Ensure there is sufficient stress relief in the membrane corners and trim back accordingly.
- 10 Any overlaps should be joined with PHS Argo Tape. See Fig 5.3
- 11 Services penetrating the membrane should be sealed with PHS Argo Tape or a suitable PHS Grommet.

## PHS Argo Joint Tape



Tape is perfect for sealing membrane overlaps, joints, connections and penetrations. You can also apply it to a variety of different substrates and their material transitions while ensuring optimum airtight sealing.

### Application

- PHS Argo Joint Tape is used indoors for the airtight bonding and sealing of penetrations and overlaps of wind and vapor barriers according to DIN 4108-7. Surfaces must be stable, dry, free of grease and dust, and may not contain adhesive-repellent coating.
- For bonding MDF boards we recommend preconditioning the surfaces with PHS Primer.
- We recommend bonding to surfaces such as smooth or slightly rough PE webs and non-waxed kraft paper. Aluminum sheeting, impact resistant plastic, metal and wooden sheathing (e.g. oriented strand boards) may also be used.



Fig 6.0 Sealing membrane overlaps



Fig 6.1 Sealing around services

### Fitting Instructions:

#### Membrane to Membrane:

Align the membrane correctly (100mm overlap) and fix the tape evenly between the membranes. Apply pressure with roller or similar device.

#### Membrane to Steel:

The steel should be dry, dust and rust free. If in doubt apply a coat of primer to the steel and let dry. Apply the PHS ARGO Joint Tape equally between the membrane and the steel, apply sufficient pressure to ensure good adhesion.

#### Membrane to Timber:

The timber should be reasonably smooth, dry and dust free. If in doubt apply a coat of primer to the timber and let dry. Apply the PHS ARGO Joint Tape equally between the membrane and the timber, apply sufficient pressure to ensure good adhesion.

#### Membrane to Concrete:

The concrete should be smooth, dry and dust free. It is recommended that a coat of primer is applied to the concrete and let dry. Apply the PHS ARGO Joint Tape equally between the membrane and the prepared concrete, apply sufficient pressure to ensure good adhesion.

## PHS Ottello Adhesive Sealant



One component adhesive, suitable for permanent airtight adhesion of construction membranes to masonry concrete, plaster, wood and similar substrates.

### Application

- Airtightness layer must be stress-free and mechanically fastened.
- The substrates for the PHS Ottello must be non-sandy, clean and dry. Impurities such as dust, grease, oil, tar, bitumen and release agents like surfactants and silicones must be removed.
- Poor surfaces should be pre-treated with the PHS Primer and a sample application should be tested.



Fig 7.0 A concrete floor being prepared by brushing dust/debris with paint brush.

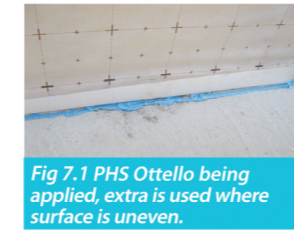


Fig 7.1 PHS Ottello being applied, extra is used where surface is uneven.



Fig 7.2 Membrane is gently pressed against sealant.

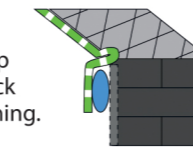


Fig 7.3 Take care of the overlaps & joints.

### Fitting Instructions:

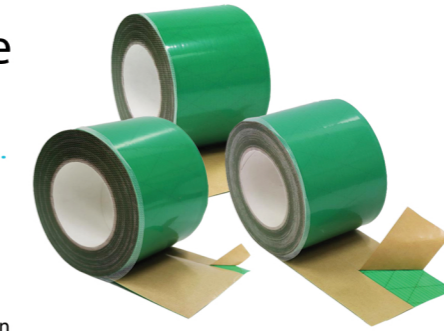
- 1 The bonding surfaces should be dry and dust-free.
- 2 Apply a single 6-8mm bead of PHS Ottello on substrate, extra should be applied where the surface is uneven.
- 3 Gently press the membrane against the sealant, ensure there is no stress on the membrane.
- 4 Apply PHS Ottello Sealant in the overlaps at the corners.
- 5 Allow Sealant to dry and check for secure bonding.

Stress Relief loop with 3-4mm thick adhesive remaining.



Application Temperature: +5°C - +40°C  
Storage Temperature: +5°C - +25°C  
Shelf Life (Un-opened): 12 months.  
Disposal: Normal Refuse.

## PHS Split Release Tapes



### Application

- Surfaces must be stable, dry, free of grease and dust, and may not contain adhesive-repellent coating.
- For bonding MDF boards or masonry surfaces we recommend preconditioning the surfaces with the PHS Primer.
- The installer should firstly apply a sample of the tape and test adhesion.
- Cut the required length of tape; fold the tape along the split line.
- The 50mm release liner strip is removed and the tape is applied



Fig 8.0 The installer has folded back the 12mm strip before removing the release liner

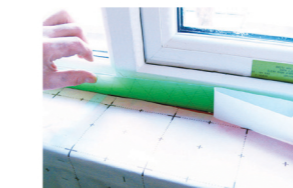


Fig 8.1 Remaining liner being released.



Fig 8.2 A finished window reveal corner detail.

### Fitting Instructions:

- 1 Remove any window protective foil and wipe the frame with a solvent, to remove any undesirable surface residues.
- 2 Measure the required length of tape. See Fig 8.0
- 3 The 15mm release liner strip is removed and the tape is applied to the window frame.
- 4 Remove the remaining tape to reveal. See Fig 8.1
- 5 Ensure there is sufficient stress relief on the tape, this prevents pulling of the tape and possible damage. See Fig 8.2

# APPLICATION GUIDE

High Performing Airtightness and Vapour Control Products.



### The Intelligent Environment

The application of air tightness products prevents unwanted Air Infiltration & Air Leakage in a building envelope, increasing comfort and reducing energy bills. The vapour controlling functions protects the building structure from interstitial condensation that would otherwise result in mould and structural damage. This is due to unwanted vapour diffusion into the building envelope. When the vapour condenses, it reduces u-values, causes degradation to insulation and other elements such as timbers and plasterboard. With Gerband you can rely on years of German building physics research, product development, testing and manufacturing.

### Advantages

- Cost effective air tightness and vapour controlling products.
- Developed, tested and manufactured in Germany
- CE approved and DIN4108 compliant.
- Facilitates speedy applications.
- A range of products for the most difficult situations.
- Extensive product support.
- Airtightness & vapour control for Masonry & Timber frame.

## PHS Optima Vario Window Tape



PHS Optima Vario Window Tape is a special one-sided, full-surface adhesive sealing tape with a polymer film laminated with non-woven fabric on both sides. This Sd variable tape is perfect for fast and reliable sealing of window and door reveals, and can be applied internally or externally. PHS Optima Vario protects against interstitial condensation by having a variable Sd value. In the winter the tape becomes more vapour closed to prevent moisture travelling into the building fabric and condensing due to reduced temperature. In the summer the tape becomes more vapour open, to allow any moisture that infiltrated the wall in the winter to dry out internally.

### Application

- The bonding surfaces must be smooth, dry, free of oil, grease and dust, firm and stable. The reveals have to be smoothed out according to DIN 4108, part 7 for installation of PHS Optima Vario. Especially in low temperatures, it must be ensured that all bonding surfaces are free of any frost and ice. Application surface may require priming with PHS Primer, e.g. for solidification of sandy surfaces.
- Application at 0 to -10°C will reduce initial adhesion, although application is possible at such temperatures, high final strength will need longer time of contact.

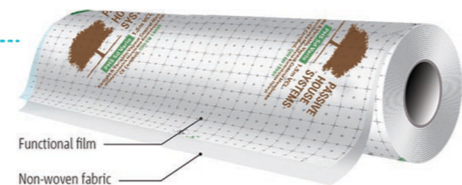
### Fitting Instructions:

- Measure and cut PHS Optima Vario to length with at least 5cm to spare.
- Peel the cover foil off the self-adhesive strip and press the strip to the back of the window frame. Proceed in this way on all sides of the window frame to be sealed.
- The split protective foil on the full-surface self-adhesive layer is peeled off as required and the tape carefully pressed onto the reveals substrate. Ensure that the tapes overlap in the corners.
- Use a pressure roller to achieve optimal initial adhesion.



Fig 6.0 sealing window to masonry reveal

## PHS Sd Variable Membrane



### Application

- Store in dry rooms from +5C to +25C, protected from UV-radiation.
- The membrane should be applied perpendicular to the direction of the application surface i.e. studs, rafters and joists.
- The membrane should be fixed with staples every 150mm or PHS Double Sided Tape.
- PHS Argo Airtightness Tape or PHS Grommet should be used for penetrations.
- It is recommended to use PHS Argo Airtightness Tape for bonding barrier overlaps, penetrations and repair spots.
- For connections to concrete or masonry PHS Ottello Adhesive Sealant is recommended.
- Ensure there is a 100mm overlap of the membranes and tape with PHS Argo Airtightness Tape.

PHS Sd Variable Membrane is a multi-layered vapour barrier with a moisture-variable sd value. It's used indoors to create an airtight barrier and a vapour control layer for the protection of the construction according to DIN 4108.

PHS Sd Variable Membrane is a reliable airtight and vapour control layer. During the winter it reliably prevents diffusion of interior humidity into the roof and wall construction. As a result – during summer it allows for back fusion from the insulation as well as the wall and roof construction. It also prevents condensation that facilitates mildew growth and constructional damages.

## PHS Primer

PHS Primer improves the adhesion properties of the substrate to be bonded. It is designed to prepare rough and sandy application surfaces for airtightness tape adhesion.



Fig 8.0 Primer being applied between wall and wall plate with paint brush.



Fig 8.1 Primer is allowed dry before applying tape.

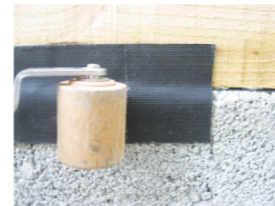


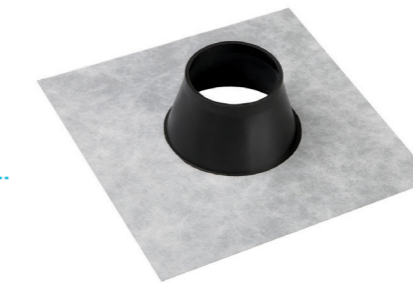
Fig 8.2 Gerband 386 is applied and pressure applied with roller.

### Fitting Instructions:

- Apply PHS Primer on the surface to be bonded.
- Let the primer dry well for further processing - the surface of the applied primer should feel mostly dry.
- Apply several times on difficult substrates, if necessary, and allow to dry well each time.
- Apply the adhesive tape on the treated surface and press firmly at once. Please observe the instructions for use of the respective adhesive tape.

Application Temperature: +5°C - +35°C  
Drying time approx. 30 min - 60 min  
Storage Temperature: +5°C - +25°C  
Shelf Life (Un-opened): 12 months.  
Disposal: Normal Refuse.

## PHS Service Grommets



### Grommets

Grommets offer a permanent stress relief and a perfect seal of all services penetrating the air tightness envelope of the construction, reduce the heat loss of the construction, save energy and prevent damage due to humidity.



Fig 9.0 A solar pipe penetrating the membrane.

### Fitting Instructions:

- The surfaces must be dust-free and free of grease as well as dry and stable.
- Ensure there is a tight fit between the EPDM sleeve and the service carrier.
- Self-adhesive surface liner should be removed and the grommet fitted to the substrate.
- Non-adhesive. Tape grommet with a suitable universal tape to the airtight layer.

### Downlight Hoods

The downlight hood prevents air leakage through recessed lights, they also permit insulation to fully cover the recessed light, enhancing the building thermal performance. Tested to and compliant with BSEN 60598.1 and BSEN 60598.2. Fire tested to BS 476.21. Overcomes thermal and vapour transmission to loft voids when recessed lights are fitted.



Fig 9.1 Recess Loft Hood section

### Fitting Instructions:

- Apply Gerband 6300 primer to the substrate and hood and allow to dry.
- Apply Fortax 6400 sealant to hood base.
- Fix wires so that they are accessible when hood is fitted, through the hood or under the hood. Ensure any wire penetrations/cut-outs in the hood are sealed with sealant afterwards.
- Fit the hood onto the application area and apply extra sealant.
- Allow sealant to dry before any further work is done around hood.



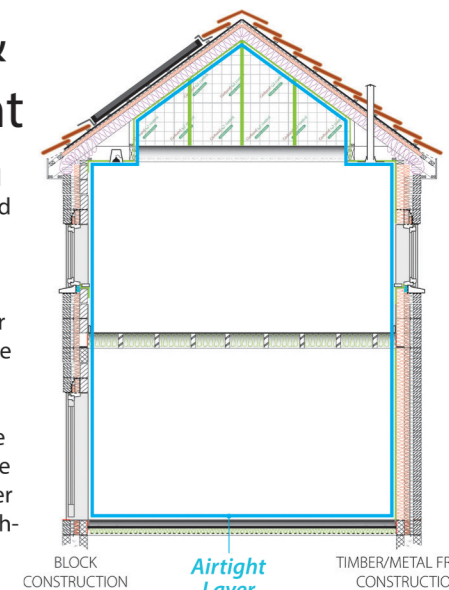
Cable Felt Collar Waste Pipe Felt Collar

## Air Tightness - Build Tight & Ventilate Right

The airtightness layer is created with a series of components and applied by suitably trained installers.

The components used and their application is determined by the construction type.

The airtightness layer should be planned as early as possible. The integrity of the airtightness layer needs to be maintained throughout construction.



Subject to change without notice in line with product advancements. We strongly advise users to test the product's suitability for their own particular requirement. This information is provided without liability. The pictures are for illustration only.

For further details please contact our Product Engineers.

Rev: 180201



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