

PASSIVE  
HOUSE  
SYSTEMS

# Airtightness and Vapour Control Systems



## The PHS Airtightness System

- Saves energy
- Keeps draughts out
- Keeps heat in
- Beats present and future regulations

**Save**  
Cost and Energy

**Prevent**  
Air Leakage

**Protect**  
Against Structural Damage

PRODUCTS FOR THE MODERN BUILD

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# Why Airtightness and Vapour Control?

Airtightness is the control of air leakage, i.e., the elimination of unwanted draughts through the external fabric of the building envelope. This will be achieved by the correct and proper installation of an airtight vapour controlling system.

The benefits of improved insulation levels and more energy efficient heating systems are lost if warm air can leak out of a building and cold air can leak in. A mandatory requirement for airtightness has been set by the building regulators in the UK and Ireland to ensure that reasonable standards are being achieved, and it is compulsory to subject samples of newly built dwellings to a pressure test in order to measure and confirm their airtightness performance on completion.

Consequently, condensation, mould, rot, damp and structural damage are also eliminated. This ensures a more viable structure, an insulation layer that can perform properly as it is now protected against penetrating moisture reducing the amount of heat demand in the building and CO2 emissions.

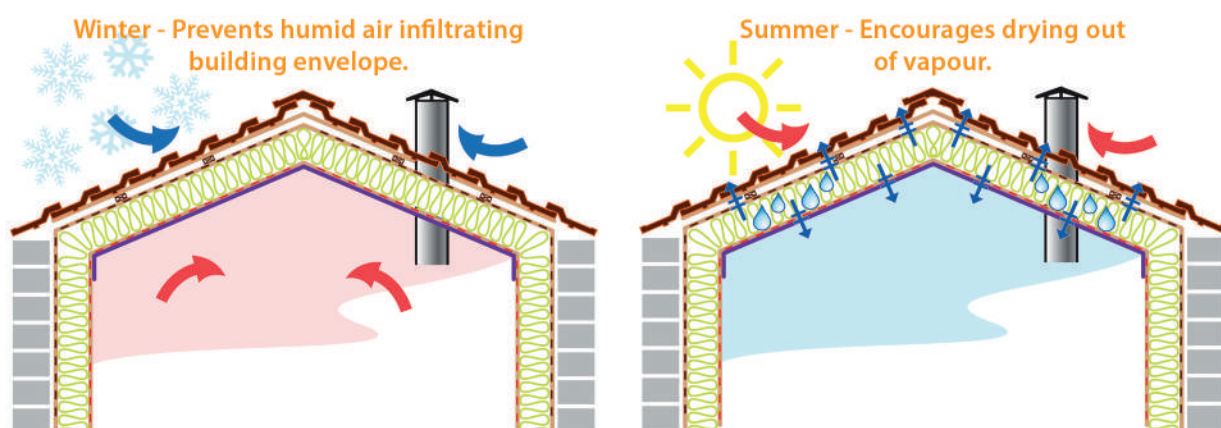
By specifying the PHS Airtightness System, not only do you get airtightness and moisture control, you get all of the following:

## Features:

- Innovative products for masonry, timber and steel frame construction.
- Non-toxic, environmentally friendly products.
- German manufacturing excellence.
- Tapes and membranes with exceptional tear and tensile strengths.
- User-friendly applications.
- Unrivalled product support, technology and installation training.

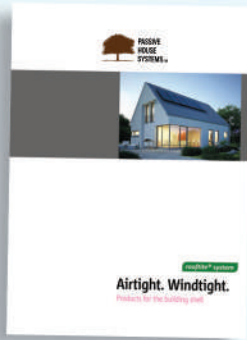
## Benefits:

- The system prevents mould and mildew growth by reducing the potential for moisture accumulation (on surfaces or between building fabrics).
- For renovation/new-build projects, the PHS system, together with a quality insulation product, dramatically improves the thermal performance of the building.
- The Sd Control Membrane value allows timber dampened by rainfall during construction, to dry out faster.
- Reduced heating bills and unplanned air movements (draughts).
- Improved air permeability performance of the building - for the life of the building!



The PHS Airtightness and Vapour Control system is designed to make a building airtight while allowing appropriate vapour control.

# Information Navigator



## CPD Training

We have trained hundreds of Architects, Building Consultants, and various Tradesmen on many aspects of NZEB practices. Contact us today regarding any of our training programs



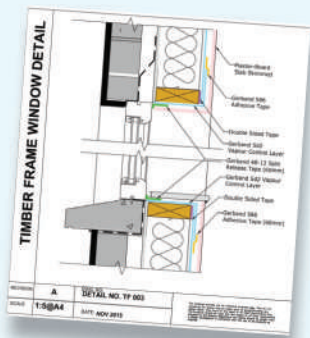
## Product Datasheets

The most important information and technical data for each individual product.



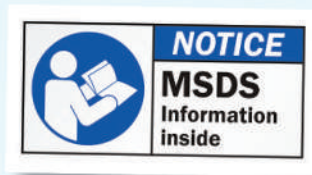
## CE Certification

Where applicable our products are CE certified, giving you peace of mind.



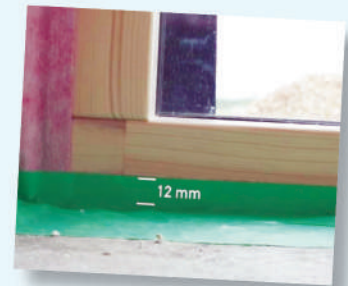
## Technical Drawings

Checkout our range of technical drawings illustrating methods and components for making your project airtight.



## Material Safety Data Sheets

We have a range of MSDS for the appropriate products.



## Application Videos

We have a range of product application videos on our website, which you can view on-site with your smart phone or tablet device.



## Local Authority Building Control (LABC Certification)

LABC Registered Details is a certification system providing compliance with building regulations and standards across England, Wales and Scotland.


Our **LABC Certified Gerband** products are:

- Sd Control Membrane,
- 586 Uni-tape,
- Split Release Tapes,
- Fortax 6400 Adhesive Sealant.

Using our LABC certified system makes the building control system easier, increases industry confidence while also raising the profile of your company. We have also established a **LABC Airtightness Installer Certification** Scheme to develop knowledge and competence.

# Products at a Glance

**pg 15**




**PHS Down Light Hood**

Our fire rated down lighter hoods are manufactured from inert mineral fibres which are rot, corrosion and vermin resistant and meet all UK Building Regulations and Lighting Association requirements.

When sealed to membrane the hoods form an airtight and vapour seal, conveniently insulation can be fully applied over the down lighter.

**pg 09**




**PHS Argo Tape**

This very high tack tape is a PE film with a moisture resistant polyacrylate adhesive and an embedded PET reinforcement mesh.

Used to permanently seal membrane overlaps and to wood, metal, masonry and plastic.

**pg 11**



**PHS Apollo 1.5**

Diffusion supporting vapour barrier made from a double layered laminate file.

Reduces the risk of interstitial condensation.

A 100mm matrix provides for accurate & speedy applications.

**pg 07**



**Gerband 587**

Gerband 587 Special Adhesive Tape is an external membrane tape that's permanently resistant to moisture. It seals all known pitched roof underlay and façade membranes.

**pg 09**




**PHS Ottello Sealant**

Water based single component adhesive is ideal for sealing membrane to uneven surfaces.

With the application of an 8mm bead a permanently elastic and high strength air tight bond is formed between the substrate and the membrane.

**pg 19**



**Winflex-I**

Winflex-I is a diffusion-open and plasterable sealing tape for airtight sealing of internal reveals of windows and external doors. 15mm adhesive strip for easy application onto windows.

**pg 22**



**Loft Stairs**

A superior stairs complete with spring counterbalance mechanism for delightfully easy operation. A real winner when it comes to the prevention of heat loss with its 80mm or 133mm insulation and air impermeable seals.

**pg 21**



**PHS Grommet**

For the fast & permanent sealing of installations through a vapour barrier we recommend a grommet with the correct diameter.

The EPDM grommets are suitable for the sealing of wires, waste, water & solar pipes.


**pg 20**



**PHS TRS 600**

Self-expanding PU foam sealing tape with a unique combination of resilient foam and water resistant binder. This creates a slow expanding pre-compressed foam tape that is used to resist weather ingress.


**pg 19**



**PHS Optima Vario Window Tape**

Winflex Optima Vario is a special plasterable FULL ADHESIVE & Sd variable tape for fast and reliable sealing of window and door reveals. Can be used internally or externally.


**pg 10**



**PHS 50/50 Tape**

Ideal for sealing between building components, for example, between joists and blocks. This very high tack tape is a PE film with a moisture resistant polyacrylate adhesive and an embedded PET reinforcement mesh.

**pg 14**



**PHS Double Sided Tape**

This tape is a double sided and poly-acrylate based. Delivered in 50m rolls it has an extremely high tack. The Gerband 970 permits the high speed application of membranes to many surfaces and prevent staple holes.

**pg 10**



**PHS 45/15 Tape**

Ideal for the two-part application of tape between the window/door frames and inner reveals.

The backing liner can be removed in two parts, for example 15mm for pressing onto the frame and the remaining 85mm for pressing against the reveal.

**BLOCK CONSTRUCTION**

**TIMBER/STEEL FRAME CONSTRUCTION**

## Gerband 586 Airtightness Tape

Gerband 586 hermetic is a pliable and stretchable PE-film sealing tape with moisture-resistant polyacrylate adhesive of extremely high tack and permanent adhesion as well as outstanding ageing resistance. The PET reinforcement helps preventing over expansion of the adhesive tape.

Gerband 586 hermetic is used indoors for the air-tight bonding and sealing of penetrations and overlaps of airtight and vapour control layers according to BS 9250.

### Technical Data

Backing	polyethylene film, UV-stabilized, with PET-filament reinforcement
Thickness, backing	0.08 mm
Total thickness (DIN EN 1942)*	0.34 (without release liner)
Tensile strength (DIN EN 14410)*	> 50 N / 25mm
Elongation at break (DIN EN 14410)*	150% to 200%
Release liner	silicone paper
Type of adhesive	polyacrylate adhesive
Adhesion (EIN EN 1939)*	> 30 N / 25 mm
Tack	very high
Shear strength	medium
Moisture resistance (GPM 812)	permanent resistance
Temperature range	-40 °C to +80 °C
Application temperature	-10 °C to +40 °C, recommended at > +5 °C
Roll Length	25m
Roll Width	50, 60, 75, 100, 150mm



### Dimensions

- Width: 50, 60, 75, 100, 150mm.
- Length: 25m.

## Gerband Fortax 6400 Sealant (Internal)

FORTAX® 6400 is a system component of the Gerband *rooflite*® System and can be used in the contact adhesive process. FORTAX® 6400 can be used to bond airtight and vapour control layers to a wide variety of substrates including masonry and concrete.

A one-component adhesive sealant based on a polymer dispersion.

- Permanently elastic.
- High early strength.
- Permanently self-adhesive.
- Extremely high ageing-resistance.
- Strong initial tack.
- Does not embrittle.

### Technical Data

Raw material base	polymer dispersion
Colour	light blue
Consistency	pasty-elastic
Application temperature	+5 °C to +40 °C
Storage	+5 °C to +25 °C, frost free
Shelf life	12 months in unopened cartridge / sausage
Ecology	no environmental or indoor toxins, solvent-free
Disposal	safely on the domestic waste



### Contents

- 310ml Tube.
- 600ml Sausage.

# Gerband 587 Special Adhesive Tape

Gerband 587 Special Adhesive Tape is an external membrane tape that's permanently resistant to moisture. It seals all known pitched roof underlay and façade membranes.

Gerband 587 Special Adhesive Tape is waterproof, wind-tight and temperature resistant. It adheres excellently onto wood, smooth bricks and solid concrete surfaces. Gerband 587 can be bonded to porous or sandy substrates sufficiently if primed and can be used as a repair tape for damage or tears in membranes.

## Product description

### Carrier

- Special film.
- Filament protection against over-expansion.
- Very pliant, even in frosty conditions.
- Temperature-stable until +120°C.
- UV resistant, approx 12 months during direct solar radiation.

### Adhesive

- Polyacrylate adhesive.
- Extremely high initial and permanent adhesion.
- Good adhesive characteristics especially at low temperatures.
- Very high tack.
- Very good ageing resistance.



### Dimensions

- 60mm x 25m.

## Technical Data

Total thickness:	(DIN EN 1942)*; 0.33 mm
Tensile strength:	(DIN EN 14410)*; >50 N / 25 mm
Elongation at break:	(DIN EN 14410); 20%
Adhesion:	(DIN EN 1939)*; >25 N / 25 mm
Temperature range:	-30C to +120C
Moisture resistance:	(GPM 812); Permanent resistant
Core diameter:	76.5 mm
Storage:	Dry rooms, +5°C to +25°C
Application temperature:	-10°C to +40°C

# Gerband 712 Aluminium Film Tape

Gerband 712 is a rigid aluminium film tape with a strong adherent, strongly cross-linked polyacrylate adhesive. It has high ageing resistance and good shear strength.

It is used for sealing joints in foil faced insulations and sealing applications under high temperature load.

## Product description

### Carrier

- Aluminium film, soft annealed; thickness 0.1mm.

### Adhesive

- Polyacrylate adhesive, strongly cross-linked.
- High adhesion.
- High heat resistance.
- High shearing resistance.

### Release liner

- Polyethylene film.

### Special features

- Flame resistant.
- Outstanding ageing resistance; strength of the bond increases over time.



### Dimensions

- Width: 50, 75, 100mm.
- Length: 50m.

## Technical Data

Total thickness (DIN EN 1942)*:	0.10 mm
Tensile strength (DIN EN 14410)*:	>60 N / 25 mm
Elongation at break (DIN EN 14410)*:	>5 %
Adhesion (DIN EN 1939)*:	>15 N / 25 mm
Temperature range:	-40C to +140C
Heat resistance (short-term):	+180C
Shearing resistance:	>24 h; 0.5 kg / 625 mm2 / +70C

# Gerband Sd Control Membrane

The Gerband Sd Vapour Control and Airtight Membrane protects the construction from moisture damage and reduces heat loss caused by draughts. It ensures a regulated diffusion of water vapour through the thermal insulation maintaining the u-value integrity of the insulation.

The membrane is extremely easy to work with, semi-transparent, easily cut and comes with graphics matrix to facilitate installation.

Like all of Gerband products, it is extremely durable.

## Application

- Store in dry rooms from +5°C to +25°C, 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 Double Sided Tape.
- Gerband 586 or a suitable PHS Grommet should be used for penetrations.
- For bonding barrier overlaps, penetrations and repair spots, Gerband 586 or a similar tape is recommended.
- For connections to concrete or masonry Gerband FORTAX 6400 is recommended.
- Ensure there is a 100mm overlap of the membranes and tape with Gerband 586 or another suitable tape.
- Ensure the corner overlaps are completely sealed.

## Technical Data

Backing	double-layered laminated film
Colour	white, printed
sd-value	2.3m ± 0.2m (DIN EN 1931:2000)
Fire performance (DIN EN 13501-1)	class E, corresponds B2 according to DIN 4102
Core	72 mm inner core diameter
CE certificate	passed
Temperature range	-20 °C to +80 °C
Grammage density	95 g / m <sup>2</sup> (± 7%)
Tensile strength (DIN EN 12311-2)	
• lengthwise	≥ 100 N / 50 mm
• crosswise	≥ 80 N / 50 mm

Functional film  
Non-woven fabric



### Dimensions

- 1.5 x 50m.

## Carrier

- Double-layered laminated film.
- Outstanding ageing resistance.

## Colour

- White, printed.
- Finally – the CE sign according to DIN EN 13984 gives the necessary security for the application on the construction site according to all valid requirements of the ENEC and construction standards.

### Elongation at break (DIN EN 12311-2)

- crosswise • lengthwise

60%

### Tear strength (DIN EN 12340-1)

- lengthwise
- crosswise

≥ 50 N

≥ 50 N

### Water resistance

passed

### Storage

in dry rooms from +5 °C to +25 °C  
protected from UV-radiation



## PHS Ottello Adhesive Sealant (Internal)

PHS Ottello Adhesive Sealant is a contact adhesive that creates permanent connections of airtightness layers to a substrate in accordance with DIN 4108-7 and allows installation of airtight and vapour control layers to BS 9250 and BS 5250.

PHS Ottello Adhesive Sealant is: solvent free, highly adhesive, permanently elastic and has a fast curing time.

### Area of Application

PHS Ottello Adhesive Sealant is suitable for airtight adhesion of construction membranes to masonry concrete, plaster, wood and substrate. It's suitable for internal use on the condition that it's not exposed to weathering. Bonding surfaces should be: dry, grease and dust-free.

### Application

Application temperature: +5°C to +40°C. Apply in approximately 8mm wide beads onto the substrate. Install construction membrane with a stress relief loop and press down gently on PHS Ottello Adhesive Sealant - do not squeeze. During drying period avoid pulling on the membrane.



### Contents

- 310ml Tube,
- 600ml Sausage.

### Technical Data

Colour:	light blue
Raw material base:	polymer dispersion
Application temperature:	+5°C to +40°C, frost free
Storage:	+5°C to +25°C, frost free
Shelf life:	12 months in unopened cartridge
Ecology:	no environmental or indoor toxins, solvent-free
Disposal:	safely on the domestic waste

## PHS Argo Airtightness Tape

PHS Argo Airtightness Tape is a universal airtightness tape, with a low density polyethylene film backing, making it pliable and stretchable. The tape offers a permanent adhesion with a high initial tack.

PHS Argo is designed to work with the PHS range of membranes. PHS Argo seals membrane overlaps, joints, connections and penetrations. It can also be applied to a variety of different substrates and the material transitions, while ensuring optimum airtight sealing.

PHS Argo complies with the high requirements of permanent bonding of airtight layers as per the EnEV and DIN 4108 part 7, regarding the permanent airtight sealing of vapour barrier sheeting.

### Suitable substrates

- Wood
- Sheathing boards (OSB)
- Metals
- Electric cables
- Gypsum fibreboards
- Plasterboards

### Suitable Membranes

- Vapour control layers / retarder sheeting
- Smooth to rough PE/PA/PO/PP sheeting
- Kraft papers, Aluminium membranes

### Dimensions

- 50mm x 25m.
- 60mm x 25m.
- 100mm x 25m.
- 150mm x 25m.



### Technical Data

Adhesive carrier LDPE-Foil, green, reinforced with filament	
Adhesive system:	Acrylic dispersion
Liner:	Silicon paper, brown
Thickness without liner:	0.29 to 0.32 mm (DIN EN 1942)
Peel adhesion:	>35 N/25 mm; 40 % DIN EN 1939
Elongation:	> 25 N/25 mm; 100% DIN EN 14410

Processing temperature:	+5°C recommended, Processable from -10°C to +40 °C
Temperature resistance:	-40°C to + 100°C
Condensation resistance:	Very high
Resistance to ageing:	Very high
Tack:	Very high

# PHS Split Release Window Tape

The PHS 85/15 and 45/15 Split Release Tapes are designed for sealing between membrane and windows/outer door frames quickly and easily, creating an immediate vapour and airtight barrier.

The PHS 50/50 Split Release Tape can be used between wall to ceiling junctions, joist to wall penetrations and door junctions, again creating a vapour and airtight barrier.

The sealing tapes are a pliable and stretchable PE-film with moisture resistant polyacrylate adhesive of extremely high tack and permanent adhesion, as well as outstanding ageing resistance.

The split release function permits the installer to quickly apply the tape to the window frame and reveal in separate and manageable steps. The 15mm strip facilitates the speedy and accurate fixing of the tape to window frame.

The PET reinforcement helps prevent over expansion of the adhesive tape.



### Dimensions

- 45/15 mm.
- 85/15 mm.
- 50/50 mm.



## Technical Data

Adhesive carrier LDPE-Foil, green, reinforced with filament	
Adhesive system:	Acrylic dispersion
Liner:	Silicon paper, brown
Thickness without liner:	0.29 to 0.32 mm (DIN EN 1942)
Peel adhesion:	>35 N/25 mm; 40 % DIN EN 1939
Elongation:	> 25 N/25 mm; 100% DIN EN 14410

Processing temperature:	+5°C recommended, Processable from -10°C to +40°C
Temperature resistance:	-40°C to + 100°C
Condensation resistance:	Very high
Resistance to ageing:	Very high
Tack:	Very high

# PHS Alkoe (Kraft Paper Tape)

PHS Alkoe Tape is an airtight and extremely high bond strength product, which can be applied to a large range of surfaces for improving a building's airtightness and vapour control.

The polyacrylate glue gives the tape extremely high adhesion properties, as well as excellent age resistance.

This tape meets wind and airtightness requirements of BS 9250.

PHS Alkoe Tape has a high tear resistance in the longitudinal and transverse direction. It also has a soft, pliable consistency and water-repellent surface.

### Glue

- Polyacrylate adhesive.
- Extremely high bond strength.
- Very high tack.

## Technical Data

Tensile force (DIN EN 14410)	>150N / 25mm
Elongation (DIN EN 14410)	3% to 5% in longitudinal direction
Adhesion (DIN EN 1939)	>40N / 25mm
Temperature range	-40C bis +80C
Thickness (DIN EN 1942)	0,35mm



### Dimensions

- 60mm x 40m.

UV lacquer  
Polyethylene foil  
Special Paper  
Polyacrylate Adhesive  
Silicone Paper

### Special features

- Superior resistance to ageing.
- Hand tearable.
- Particularly low emissions.

# PHS Apollo 1.5 Vapour Control Membrane

PHS Apollo 1.5 Vapour Control Membrane enables airtightness and vapour control in roof and wall constructions.

PHS Apollo 1.5 Vapour Control Membrane is a 1.5m wide membrane, with an optimum fixed vapour resistance level of Sd 2m.

This allows for an ideal level of vapour control, by preventing diffusion of internal vapour into the building envelope back in winter and allowing diffusion in summer.

The CE sign according to DIN 13984 gives the necessary assurance for the quality of the product.



## Dimensions

- 1.5m x 50m.
  - 3m x 50m\*
- \*(Pallet order only, 35 pieces).

## Application Notes

- Apply at temperatures from +5°C to +40°C.
- Enables the secure building of roof and wall construction.
- For bonding barrier overlaps, penetrations and repair spots, we recommend **PHS Argo Airtightness Tape**.
- For connections to the constructional elements we recommend our universally formable **PHS Butyl Sealing Tape**; for all connections: **PHS Ottello Adhesive Sealant**.
- Store in dry rooms from +5°C to +40°C, protected from UV-radiation.

## Carrier

- Double-layered laminated film.
- Outstanding ageing resistance.

## Applications

- Indoors as a vapour control layer in order to build an airtight barrier for the protection of the construction according to DIN 4108.
- Fulfills the requirements of the EnEV and may easily be used for new buildings as well as for renovation of old buildings.
- The CE sign according to DIN EN 13984 gives the necessary security for the application on the construction site according to all valid requirements of the EnEV and construction standards.

## Colour

- White, printed.

## Technical Data

Backing	double-layered laminated film
Colour	white, printed
sd-value	2.3m ±0.2m (DIN EN 1931:2000)
Fire performance (DIN EN 13501-1)	class E, corresponds B2 according to DIN 4102
Dimension	1.5 m x 50 m
CE certificate	passed
Temperature range	-20 °C to +80 °C
Grammage density	95 g / m <sup>2</sup> (± 7%)
Tensile strength (DIN EN 12311-2)	
• lengthwise	≥ 100 N / 50 mm
• crosswise	≥ 80 N / 50 mm

Elongation at break (DIN EN 12311-2)	
• lengthwise	60%
• crosswise	60%
Tear strength (DIN EN 12340-1)	
• lengthwise	≥ 50 N
• crosswise	≥ 50 N
Water resistance	passed
Core	72 mm inner core diameter
Storage	in dry rooms from +5 °C to +25 °C protected from UV-radiation

# PHS Sd Variable Membrane

PHS Sd Variable Membrane is a multi-layered vapour control membrane with a moisture-variable sd value. It's used indoors to create an airtight and vapour control layer for the protection of the construction according to DIN 4108-7 and conforms with IS EN 13984.

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 whereas during summer it allows for back fusion from the insulation as well as the wall and roof construction. This prevents condensation that facilitates mildew growth and constructional damages.

## 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 a suitable grommet should be used for penetrations.
- For bonding barrier overlaps, penetrations and repair spots, PHS Argo Airtightness Tape or a similar tape is recommended.
- 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 or another suitable tape.

## Carrier

- Composite of a functional PA film and PP non-woven.
- Outstanding ageing resistance.
- UV resistant: at least 18 months behind glass and three months in outdoor exposure\*.

## Technical Data

Carrier	Composite of a functional PA and PP non-woven
Colour	white, printed
Dimensions	1.5m x 40m
Grammage density	95g/m2 (± 7%)
Storage	in dry rooms from +5°C to +25°C, protected from UV and radiation
Water resistance	passed
CE certificate	passed
Static air layer thickness	2.02m**
Fire performance (DIN EN 13501-1)	class E, corresponds to B2 according to DIN 4102



### Dimensions

- 1.5m x 40m.

## Special Features

- Fulfills the requirements of the EnEV as a moisture-variable vapour barrier.
- Especially useful for new buildings as well as for renovation of old buildings.
- The CE sign according to DIN EN 13984 provides the necessary security for the application in constructions to build according to all valid requirements of the EnEV and construction standards.

## Colour

- White with print.

Maximum tensile strength (DIN EN 13859-1)	Lengthwise: 150 N / 50 mm    Crosswise: 125 N / 50 mm
Elongation at maximum tensile strength (DIN EN 13859-1)	Lengthwise: >200 %    Crosswise: >225 %
Resistance to tear propagation (nail shaft; DIN EN 13859-1)	Lengthwise: >25 N    Crosswise: >25 N
Temperature range:	-40C to +80C
Diffusion-equivalent air layer	0.25 < sd < 5.0; moisture-variable*
Thickness (sd-value):	< 1 m cond. C, 3 to 5 m cond. A (DIN EN 12572 / DIN EN 1931)

# PHS Primer Adhesive

PHS Primer is based on polyacrylic dispersion, enhancing adhesion properties on surfaces.

It reinforces porous or sandy materials for the subsequent application of PHS Ottello Adhesive Sealant, PHS Sealing Tapes and other suitable tapes on wood fiberboards, sandy masonry, concrete, etc.

PHS Primer is easily, evenly applied and dries quickly.

## Application Notes

- Apply at temperatures from +5°C to +35°C.
- Drying time approx. 30min to 60min.
- Store in dry rooms from +5°C to +25°C, protected from UV-radiation.
- Keep out of reach for children!

## Technical Data

Basis	polyacrylate dispersion
Temperature range after application	-20 °C to +60 °C
Shelf life	in unopened can, 12 months
Fireboards	approx. 6 m <sup>2</sup>
Stone/concrete	approx. 12 m <sup>2</sup>



Contents  
• 500ml.

# PHS Spray Primer

PHS Spray Primer is a ready-to-use primer, designed to prepare various construction substrates, e.g. plaster, concrete, aerated concrete, bricks, lime stone, metal sheets.

It can be used in conjunction with our window tapes, PHS Split Release, PHS Optima Vario and our butyl tapes.

## Application

- Before applying, shake the can vigorously.
- Apply the PHS Spray Primer on the surface to be bonded.
- Ensure the primer is completely dry prior to further processing.
- Apply the tape to the treated surface and press firmly at once.
- *Please observe the instructions for use of the respective adhesive tape.*

## Surface

Must not be oxidized and must be dry, clean, smooth, free of loose components, free of dust, grease, ice and dew. Absorbent substrates may be slightly damp (no running water, no water film), a drying of the substrate is no longer possible after application of the PHS Spray Primer. Before processing, check whether the substrate is compatible with PHS Spray Primer. Smaller holes, imperfections and fillings have to be closed or prepared before priming with a mineral repair mortar.



Contents  
• 750ml.

## Technical Data

Base:	Synthetic rubber
Colour:	Black
Viscosity:	+20°C / 900mPas
Processing time:	+20°C / approx. 4 hours
Density:	+20°C / 0.84g/cm <sup>3</sup>
Processing temperature:	+5°C to +25°C
Temperature resistance:	-30°C to +90°C

## PHS Double Sided Tape

PHS Double Sided Tape is a ready-to-use polyacrylate adhesive film.

PHS Double Sided Tape is used for bonding VCL membranes to the substrate i.e. studs and rafters. This allows for greater airtightness over the alternative of puncturing the membrane with staples and is one of the only options when bonding the substrates, i.e. steel studs, metal battens.

The ageing resistance of PHS Double Sided Tape is very high. It complies to the requirements according to DIN 18324: Fire safety of large roofs for buildings.

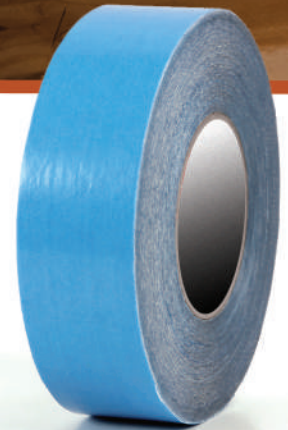
### Technical Data

Backing	Silicone paper
Total thickness	0.25 mm (without release liner)
Release liner	silicone paper, blue-white
Type of adhesive	polyacrylate adhesive
Adhesion (DIN EN 1939)*	≥ 25 N / 25 mm
Tack	very high
Shear strength	Medium
Temperature range	-30 °C to +100 °C
Application temperature	-10 °C to +40°C, recommended > +5 °C
Roll widths	35mm
Roll length (standard)	50m
Colour	Transparent
Storage	in dry rooms from +5 °C to +25 °C



#### Dimensions

- 35mm x 50m.



## PHS MS Hybrid Sealant (External)

PHS MS Hybrid Sealant is a flexible, single-component adhesive sealant.

It is resistant to overnight condensation and cures with atmospheric moisture to a flexible, rubbery plastic. This has excellent weather and chemical resistance.

PHS MS Hybrid Sealant is suitable for internal and external elastic bonding:

- Bonding of EPDM to a variety of substrates.
- Internal and external joint sealing.
- For bonding of construction components made from plaster, natural stone, aluminium, steel, zinc, copper, glass, wood, MDF, tiles, ceramic among each other or on solid mineral subsurface.

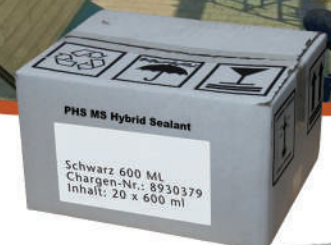
### Technical Data

Basis:	silane terminated polymer, neutral cross-linking
Colour:	black
Curing system:	atmospheric humidity
Transfer rate:	>100g / min; DIN 52 456-6 mm
Spec. weight:	approx. 1.5g / cm <sup>3</sup> ; DIN 52 451-PY
Skin formation time:	approx. 1h; + 23C / 50% r. h.
Curing:	approx. 2mm / 24h; +23C / 50 % r. h.
Volume change:	<-3%; DIN 52 451-PY
Stress-strain value at 100%:	approx. 0.4N / mm <sup>2</sup> ; DIN 52 455 NWT-1-A2-100
Tensile strength (film):	approx. 1.0N / mm <sup>2</sup> ; DIN 53 504



#### Contents

- 600ml.



Shore A hardness:	approx. 25; DIN 53 505, 4 weeks +23C / 50 % r. h.
Permissible net deformation:	25%
Temperature resistance:	-40C to +80C
Processing temperature:	+5C to +40C
Delivery form:	600 ml tubular bag, 20 tubular bags / cardboard box

## PHS Down Light (Non-Fire rated)

We have a choice of two downlight covers available:

- > **non fire rated model** – made from a durable plastic,
- > **fire rated model** – made from mineral fibre.

Both downlight hoods have been tested to all necessary standards including flammability and heat resistance testing to allow the housing of recessed lights without disrupting your homes thermal envelope and airtightness barrier.

The PHS Downlight Hood is easily fitted and sealed to an airtight membrane or plasterboard using PHS Argo Airtightness Tape / PHS Ottello Adhesive Sealant.

Downlight or recessed lights are the source of a high proportion of air leakage in the home. The downlight covers are an innovative solution for achieving a safe, easy to install sealing system for downlights. Their fitting dramatically reduces the volume of air leakage through each downlight, therefore significantly reducing draughts and energy loss. They also ensure an effective moisture barrier is maintained.

Furthermore it is widely acknowledged that for thermal insulation to be effective, it needs to be continuous! Gaps in ceiling insulation reduces its overall performance. The downlight hood restores ceiling performance to similar level as an unpenetrated ceiling by allowing the insulation to be continuous and uninterrupted over the whole area of the ceiling, saving energy, carbon emissions and cost.

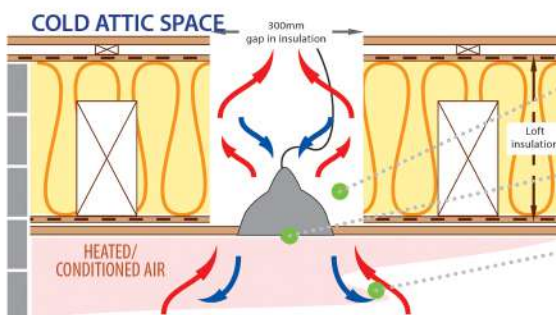


### Technical Data

Height:	130mm
Base:	200×200 (square)
Material:	Polymer
Bulb Power:	35W Max
Fire Rating:	Not Rated
Specification:	BS EN 60695-2-11:2014 BS EN 60695-11-5:2005 BS EN 60598-1, Clause 12.4
Vapour & Air Tight:	Yes

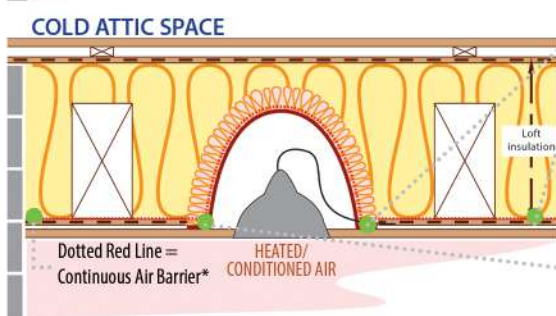
## PHS Down Light (Fire rated)

Our innovative and market leading fire rated downlight hoods maintain the building fabric integrity and offers a 30min fire rating around ceiling downlights. These devices are fitted within minutes to your vapour control membrane or plaster slab to form a permanently airtight, sound absorbing and moisture controlling barrier - allowing you to enjoy the benefits of recessed lighting. We supply a range of products to suit the most challenging specifications and working environments.



Clear area of min 300mm must be maintained around downlight resulting in non-continuous insulation.

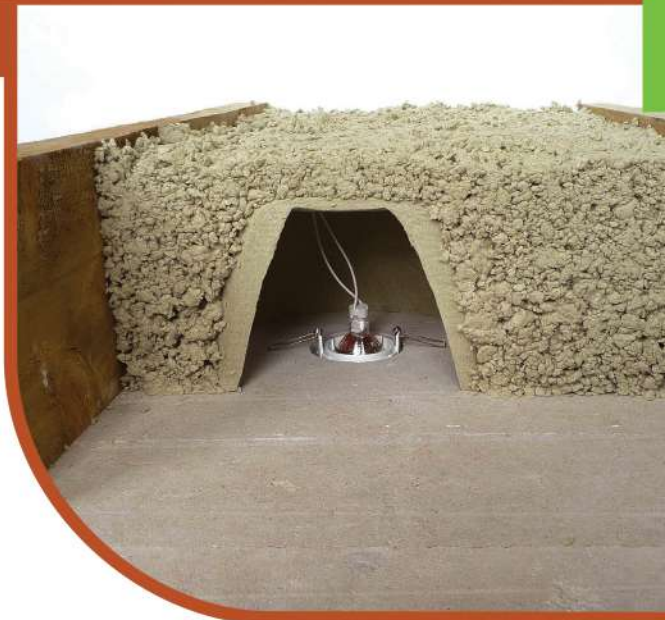
Recessed downlight  
Downlights permit air leakage to breach the plasterboard ceiling line into the voids or attics beyond.



Air tight seal water based, solvent free adhesive (super adhesive)  
Installation the 'Down-light Attic Seal' restores ceiling performance to similar level as an unpenetrated ceiling.

The 'Down-light Attic Seal'

- provides an air tight seal,
- allows for the continuity of loft insulation, &
- ensure an effective moisture barrier is maintained overcoming risk of condensation as a result of water vapour transmission to cold attic voids.



### Technical Data

Material	Mineral Fibre
Bulb Power	50W Max
Fire Rating	30 minutes
Accessories	Intumescent Sealant
Vapour & Air Tight	Yes
Specification	Thermal Test BS EN 60598 Section 12.4 & BS 476 Part 20

# PHS Hi-Thermia Reflective Membrane

PHS Hi-Thermia Reflective Membrane is a very durable and robust vapour control layer (VCL) featuring a metallised surface with a very low emissivity internal vapour barrier.

When combined with air gap, thermal comfort is enhanced by reflecting up to 97% of radiant heat back into the building.

When installed continuously with all overlaps and penetrations sealed, Hi-Thermia Reflective Membrane provides effective condensation control for all building types. We recommend using PHS Reflective Tape to seal all overlaps, penetrations and cuts in the membrane, and also for connections to adjacent airtight layers at roof and floor junctions.

## Installation

The reflective surface must be located on warm side of the insulation and always face an airspace. The preferred method is to install it with the reflective side facing into the building, then fix a standard 25mm batten over the membrane before applying the slab.

## Key Properties

- Reaction to fire: Class E.
- Water vapour transmission: (Sd) 2842.
- Emissivity: 0.027.
- Airtight: Yes.

## Application

- Airtight suspended timber floors.
- Warm pitched roof construction.
- Cold pitched roof construction.
- Timber frame construction.
- Metal roofing solutions.
- Protection for wall construction.

## Features

- High vapour resistance.
- Improved airtightness.
- Creates service void.
- Creates unbroken vapour control layer.
- Improved thermal resistance.
- R value of 0.79m<sup>2</sup>K/W when used with a minimum 19mm service cavity.
- Vapour resistance of 750 MNs/g.
- Helps to meet the requirements of the Part L in Ireland, England and Wales and Scotland.



**Dimensions**  
• 1.2 x 50m.

## Technical Data

Thermal performance / Reflectivity:	0.973
Emissivity:	0.027
Reaction to Fire:	Class E, EN ISO 11925-2, Class EN 13501-1
Water Tightness:	Passed, EN1928 (Method A, Class W1)
Water Vapour Resistance:	14.645 m <sup>2</sup> .s.Pa/kg
Tensile Strength Transverse:	371N / 50mm, EN 13859-1
Longitudinal:	316N / 50mm, EN 13859-1
Tear Resistance Transverse:	340N / 50mm, EN13859-1
Longitudinal:	325N / 50mm, EN13859-1
Density:	1.15g / m <sup>2</sup>
Thickness:	0.12mm
Roll dimensions:	1.2m x 50m
Thickness:	0.12mm
Air permability:	Airtight, EN12114



## PHS Reflecta Aluminium Tape

PHS Reflecta ensures a long-lasting bond with common construction substrates. PHS Reflecta – Reflective Aluminium Tape provides an effective airtight seal at joints and penetrations. Combined with its metallised, low emissivity surface, Reflecta reduces convection heat loss, making it the ideal solution for jointing and sealing foil faced insulation boards and reflective membranes without compromising performance. When used to tape foil faced insulation externally, Reflecta achieves a windtight layer that prevents wind-washing, increasing the thermal performance of insulation. Reflecta has a high tear, water and aging resistance making it highly durable.



### Technical Data

Backing thickness	36micron
Peel adhesion	18N/25mm
Tack Rolling Ball	20cm
Tensile strength	45N/25mm
Elongation	3%
Reflectivity	97%
Emissivity	0.03
Tear strength	226.4N/25mm
Service temperature	-10C to +120C
Applying temperature	10C to 40C

#### Dimensions

- 50 mm x 50m.
- 75 mm x 50m.

## EPDM Membrane

EPDM membrane creates weathertight seal when used externally and an airtight seal when used internally to seal windows and doors to the reveal.

The EPDM membrane can be bonded to a variety of substrates when used with PHS MS Hybrid Sealant.

We distribute full adhesive, adhesive strips and non-adhesive EPDM membranes, ranging in width (50 - 1500mm) and thickness (0.5 - 1.5mm).



### Technical Data

Reaction to fire	EN 13501-1	E
Water tightness (2 kPa)	EN 1928	Pass
Water vapour permeability	EN 1931	50.000 mu
Impact resistance	EN 12691	NPD
Joint shear resistance	EN 12316-2	NPD
Tensile strength (both directions)	EN 12311-2	≥ 7 MPa
Elongation (both directions)	EN 12311-2	≥ 300%
Tear resistance	EN 12310-2	≥ 10 N
Durability against ageing	EN 1296 / EN1931	Pass
Durability against alkali	Annex C	NPD

#### Dimensions

- Width: 50-1500mm.
- Thickness: 0.5-1.5mm.

# Hi-Thermia Multi-Foil Insulation

Hi-Thermia Multi-Foil Insulation Material is a very flexible, easy to install and high performance thermal insulation material, in a 8mm thin, flexible, multi-layer blanket for roofs and walls. It is an insulation solution complying with the highest insulation, airtightness and vapour resistance performance while being only 8mm thick. It is ideal for roofs and attic conversions.

## Technical Data

Total layer number	5 layers
Weight of polywool	55g/m <sup>2</sup>
Thickness of EPE foam	0.75mm
Thickness of silver film	12 micron
Quantity of silver film	2 layers
Weight of both sides silver woven	130g/m <sup>2</sup>
Strength of woven MD/CD	350N/50mm
Protective silver film	12 micron
Emissivity of outer/inner	0.05
R Value of blanket	Pending
Sewing size of stitches	Customized
Position of sewing	2 lines
Thickness of finished material	Around 5mm
Weight of finished roll	5.8kg
Square meter	15m <sup>2</sup>



## Benefits

- Airtight, watertight & water vaporation resistant.
- User friendly: clean, quick & easy to install, easy to stock.
- Thin, durable and lightweight, easy to carry, transport and store.
- Cost-effective, environment-friendly and safe.
- Very little wastage - minimum cutting required.
- Surface finish which guarantees emissivity for the life of the building.

**Dimensions**  
• 1.2 x 10m.

# Phonotherm 200 Thermal Insulation

Phonotherm® 200 boards are made of high quality CFC-, HCFC- and formaldehyde-free polyurethane hard foams. Phonotherm Insulation is a functional material that convinces through extraordinary properties. Phonotherm is moisture-resistant and has excellent thermal insulation properties. Its resistance to moisture makes Phonotherm very durable and prevents it from rotting. This renders Phonotherm Insulation far superior to conventional wooden boards such as press boards and MDF boards, yet has similar machining properties. You can machine it using normal carbide tools or even milled in fine detail without danger of break-out.

It is also resistant to chemicals, easy to work and you can laminate and combine it with other materials.

## Technical Data

Material:	CFC -, HCFC - and formaldehyde-free polyurethane hard foam material	
Raw density:	550 ± 50 kg / m <sup>3</sup>	
Bending strength, thickness of sheet is 15mm:	approx. 7.8 N / mm <sup>2</sup>	according to DIN EN 310
Compression strength at 10% compression:	approx. 7000 kPa	DIN EN 826
Modulus of elasticity:	approx. 500 N / mm <sup>2</sup>	
Screw withdrawal resistance:*	approx. 650 N	according to DIN EN 320
Thermal conductivity λ <sub>10</sub> :	approx. 0.076 W / (m·K)	EN 12 667 / DIN 52 612

Fire behaviour:	building material class B2	DIN 4102
	non-flammable drop free. Class E	DIN EN 13501 - 1
Resistance against ageing:	resistance against putrefaction and non-rotting.	
Water vapour diffusion resistance values:	μ approx. 17 / s <sub>d</sub> approx. 0.27m	DIN EN ISO 12572 / DIN 52 615
Thickness swell after 24 hrs in water:	approx. 1%	Internal

## Dimensions

- 2400 x 1350 x 15mm.
- 2400 x 1500 x 30mm.
- 2400 x 1500 x 25mm.
- 2400 x 1500 x 38mm.



## Winflex-I (Interior) Window Tape

Winflex-I interior is an airtight fleece tape to seal between the internal masonry reveals and windows/external doors quickly and reliably. The tape can also be used at groundfloor to walls junctions and has a high vapour resistance according to ENEC, DIN 4108-7.

Winflex-I can be bonded to porous and rough surfaces such as bricks, blocks, concrete and wood. It can also be plastered over, making it ideal for masonry construction. It has a 15mm adhesive strip to adhere to the window or door.

Due to its special construction, the tape is flexible in crosswise direction. This allows it to optimally absorb movements within the building and ensures a permanent airtight seal. The bonding between the Winflex-I and internal reveal can be sealed permanently and reliably with PHS Ottello Adhesive Sealant.



### Dimensions

- Width: 70, 100, 150, 200, 250, 300mm.
- Length: 40m.

## Technical Data

Colour:	Red (vapour Impermeable)
Basis:	High quality polymer foil, non-woven material lining on both sides
Temperature resistance:	-30C to +80C
Shelf life:	A minimum of 12 months at +10C to +25C in original packaging
Processing temperature:	+5C to +35C
Width:	70mm, 100mm, 150mm, 200mm, 250mm, 300mm
Roll length:	40m
Max. tensile linear:	>450N / 5cm DIN EN 12 311 – 2/A
Strength lateral:	>80N / 5cm

Elongation at max linear:	>20% DIN EN 12 311 – 2/A
Tensile strength lateral:	>100%
Fire behaviour:	Class B2 DIN 4102 – 1
	Class E DIN EN ISO 11925 – 2
Airtightness:	Airtight DIN 4108 – 7
Driving rain proof:	>200 cm water column DIN EN 20811
Sd value:	Approx. 55 m DIN EN ISO 12 572
UV/weather resistance:	3 months max

## 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 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

- Cut the tapes to desired length with an allowance of 5cm.
- Peel the liner off the tape strip and affix the tape to the window frame.
- Repeat the procedure on all sides.
- Align and affix the window element.
- Fill in the cavity between wall and window.
- Remove the second liner, adhere the tape to the masonry and rub well.
- Once the tape is fully bonded to the substrate, it can be plastered over or painted with dispersion paint.



### Dimensions

- 55/15(70mm) x 25m.
- 85/15(100mm) x 25m.
- 135/15(150mm) x 25m.

## Technical Data

Adhesive:	Modified acrylate dispersion, solvent-free, 220g/m <sup>2</sup>
Processing temperature:	From -5°C, ideal processing temperature +5°C to +35°C
Temperature resistance:	-40°C bis +80°C, storage at 15-25°C with rH 40-60%
Carrier material:	Special film with non-woven PP lamination
UV resistance:	3 months
Properties:	moisture-variable sd 0,4 - 20m
Tensile strength:	Alongside 190 -40/+80, crosswise 150 -30/+60, N/50mm
Elongation at tear:	Alongside 100 -30/+60, crosswise 150 -50/+100, value in %
Watertightness:	W1 in regards to EN 1928

## PHS TRS 600 Expanding Foam Tape

The expanding foam tape - PHS TRS 600 has a unique combination of resilient foam and water resistant binder.

This creates a slow expanding pre-compressed foam tape that is used to resist weather ingress in windows, doors, roofing and other construction applications. Its visco-elastic property offers noise/vibration damping while its impregnated foam structure provides an energy efficient thermal barrier. PHS TRS 600 allows some movement of the structure whilst ensuring that the weather-tight seal remains constant.

### Technical Data

Material:	Polyurethane Foam
Impregnation:	Synthetic Resin
Adhesive:	Acrylic adhesive
Resistance to driving rain:	DIN 18542; > 600 Pa, BG1
Fire classification:	DIN 4102; B1, self-extinguishing, PND 04-479
Air-permeability (pressure of 10Pa):	DIN 18542; $a < 1 \text{ m}^3 / (\text{h} \cdot \text{m} \cdot (\text{daPa}))$ – Pass BG1
Resistance to temperature changes and humidity:	DIN 8541; Passed
Resistance to UV & Heat rays:	NF P 85-570 and NF P 85-571; Passed
Thermal conductivity:	DIN 18542; 0,046W/mk
Vapour resistance:	DIN 18542; $u > 100$
Compatibility with chemical agents:	Resistance to acids, bases, diluted alkalis
Service temperature:	-40C to +100C
Application temperature:	From 5C



### Dimensions

- 5-10mm x 5.6m.
- 7-12mm x 4.3m.
- 8-15mm x 3.3m.

Storage temperature:	+1C to +25C
Shelf life:	2 years from manufacturing date
Life expectancy:	>20 years

## PHS Butyl Sealing Tape

PHS Butyl Sealing Tape – extruded and self adhesive butyl sealing strip.

PHS Butyl Sealing Tape is a specially developed double adhesive elastic tape, pressure responsive and age resistant. The tape is protected by a paper liner which is easy to remove during installation. The tape has a high tack to a variety of substrates, such as ICF, concrete, masonry, steel, timber, polyethylene and polypropylene, making it ideal for bonding airtight and vapour control layers to the substrate.

### Advantages

- High tack to a variety of substrates.
- Solvent free.
- Will not dry out, preserves elasticity.
- Doesn't transmit on fingers or installation surfaces.
- Age resistant.
- High shear strength.

### Characteristics

- Basic raw materials: Butyl rubber.
- Color: Black and grey.
- Type: Plastic.
- Line resistance: Good.



### Dimensions

- 25mm x 30m x 0.4mm.

### Technical Data

Thickness:	0.8mm
Adhesive:	Butyl rubber adhesive
Peel adhesion:	>25N/25mm
Shear strength:	>50N/25mm
Elongation:	>400
Moisture permeability:	<3g/m2

# PHS Service Grommets

## Internal Services Grommets

Our indoor services grommets are water-repellent, age-resistant and are ideal for the quick and permanent sealing of penetrations in the airtight envelope. Our grommets have a Tyvek® adhesive collar with a high adhesive power. We also supply non-adhesive grommets that can be bonded to the airtightness layer with a suitable universal tape. Our grommets are tear-resistant and water-repellent. The grommets used in our sleeves are made from a permanently elastic rubber (EPDM) that is extremely age-resistant and can be used in a high temperature range.

They are the perfect product for sealing cables, pipelines and vents in the building envelope.



## Advantages

- For indoor and outdoor use.
- Guaranteed airtight seal in accordance with DIN 4108 Part 7 and EnEV (Energy Saving Ordinance) 2014.
- Protection against building damage that may occur due to uncontrolled air exchange.
- Sealing of penetrations with vapour retarders, under-lays and much more.
- Variable application, even in pitched roof areas.
- For cables Ø 4-11mm and pipes Ø 15-270mm.
- Special bellow sleeves for sloping roofs.

## External Services Grommets\*

Establish a permanent airtight seal and plaster over penetrations in the brickwork, fibreboard panels and concrete floors. The fleece-butyl air seal sleeves are ideal for quickly and permanently sealing external penetrations. The special feature of the fleece-butyl sleeves lies in their ability to be plastered over. In the event of penetrations in the brickwork, fibreboard panels or concrete floors, the fleece-butyl air seal sleeves make a clean plaster connection possible. The fleece-butyl sleeve can also be used when installing screed floors. This sleeve provides a clean finish, even for subsequent plastering and screed work. The adhesive collar of the fleece-butyl air seal sleeves consists of a butyl adhesive layer and a PP honeycomb fleece.



### Dimensions

Internal Grommets	Adhering to membrane.		
	Adhesive	Adhesive	Adhesive
Diameter	15-22mm	25-32mm	42-55mm
Product Code	<b>GD 21</b> ✓	<b>GD 22</b> ✓	<b>GD 23</b> ✓
Diameter	50-70mm	50-65mm	100-110mm
Product Code	<b>GD 50</b> ✓	<b>PHS 50</b> ✗	<b>PHS 100</b> ✗
Diameter	50-70mm	75-90mm	100-110mm
Product Code	<b>RGD 50</b> ✓	<b>RGD 75</b> ✓	<b>RGD 100</b> ✓
Diameter	125-135mm	150-165mm	200-220mm
Product Code	<b>RGD 125</b> ✓	<b>RGD 150</b> ✓	<b>RGD 200</b> ✓
Diameter	4-8mm		
Product Code	<b>D 1</b> ✓		

External Grommets*	Adhering to Masonry.		
	Adhesive	Adhesive	Adhesive
Diameter	4-8mm	25-32mm	50-70mm
Product Code	<b>D1 FB</b> ✓	<b>GD22 FB</b> ✓	<b>RGD50 FB</b> ✓
Diameter	100-110mm	125-135	150-165
Product Code	<b>RGD100 FB</b> ✓	<b>RGD125 FB</b> ✓	<b>RGD150 FB</b> ✓

\* External Grommets available on request.

## Technical Data

	Internal	External
Storage/shelf life	cool and dry	cool and dry
Processing temperature	from -5°C	from 4°C
Temperature resistance	-20°C up to +100°C	-20°C up to +100°C
UV-resistance grommet	very good	very good
UV-resistance adhesive collar	short-term	short-term
Glue	pure acrylate	
Coating	PE-HD (Tyvek®)	
Adhesive strength	> 35/N25mm	butyl adhesive
Strain stability	> 150/N25mm	PP honeycomb fleece
Sd-Value	0.02m	1200m
Halogenfree	yes	yes

## Loft Stairs – Insulated & Air Tight

The Passive House Systems Timber Folding Loft Stairs is a superior stairs complete with spring counterbalance mechanism for delightfully easy operation. The loft stairs prevents heat loss with its 80mm or 133mm insulation and air impermeable seals.

- Top quality Pine Folding Loft Stairs, with deep, non-slip treads and plastic feet for extra stability.
- Supplied complete with a new white faced hatch, lining and ladder for quick and easy installation.
- No storage space needed in the loft as stairs stores completely on hatch.
- Effortless counterbalance operation.
- Supplied with a 2-point lock and long reach operating pole for ease of use.
- Hidden trapdoor hinges are an added feature.
- Quality accessories available.
- Fire rated hatches are also available.
- Airtightness kit between loft door frame and ceiling also available.



### Dimensions

- Polar Extreme: 1190mm x 590mm x 2800mm, 1130mm x 540mm x 2750mm.
- Polar Top: 1190mm x 590mm x 2800mm.

### Technical Data

**Polar Extreme Plus      Polar Extreme**

Insulation Thickness :	133mm	80mm
Certification :	DIN EN 14975:2007	
Tested U-value STANDARD :	0.40W / m2K	0.59W / m2K
Tested U-value with ISO-top :	0,32W / m2K	0.37W / m2K

Airtightness Level :	class 4 (EN 1026), i.e. Q100 < 0.1m <sup>2</sup> /hr.m2
Locking Mechanism :	2-point with seal compression.
Aesthetics :	A white lid finish
Construction Type :	Particularly strong step, 27mm with dovetail joints
Hand Rail Safety :	As Standard when >540mm width
Load bearing Capacity :	150kg
Optional Extras :	– ISO Top lid with 80mm extra insulation (50cm high), – loft guard rail.

## Inspection Doors Non fire rated

The Passive House Systems Inspection Door prevents heat loss with its 80mm of insulation and airtight seals.

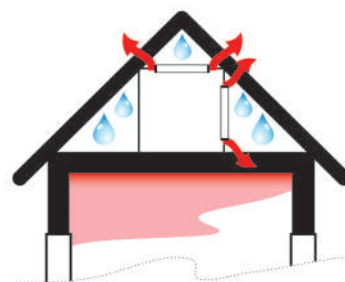
The Inspection Door is ideal for quickly and safely accessing storage space behind, for example, a knee wall attic space. Supplied with a 2-point lock and a short reach operating pole for ease of use.

### Advantages

- Well insulated (80mm of high grade insulation).
- An airtight assembly (Class 4 to EN1026).
- Secured with a 2-point locking mechanism.
- Quick and easy to fit.
- Aesthetically adaptable with a paintable white lid finish.
- Outer Airtightness Kit included.
- Easy to use with a short locking pole.

### Technical Data

Size:	590mmX590mm	690mmX690mm	790mmX540mm	1090mmX540mm
Opening:	600mmX600mm	700mmX700mm	800mmX550mm	1100mmX550mm
U-Value:	0.4 W/m2.K; Ref: ISO 6949			
Airtightness:	Class 4; Ref: EN 1026			



### Dimensions

- 590mm x 590mm.
- 690mm x 690mm.
- 790mm x 540mm.
- 1090mm x 550mm.

A poorly insulated and draughty inspection door will result in significant heat loss and potential moisture damage in your attic space.

**Always insist on a quality inspection door and ensure it is well fitted.**

## Access Door-Ceiling Mounted EI30

The Access Door Ceiling Mounted panel consists of aluminium profiles with plasterboard inlay thickness of 12.5mm, 15mm, 18mm, 20mm or 25mm (EI30).

Both an outer and an inner frame of the access panel consist of four single frames, which are firmly connected due to a special welding process. The access panel is equipped with two catch wires. In order to avoid accidents, this safety-system has to be secured after each opening.

A joint gap of 1.5mm is visible between outer frame and door leaf, which is equipped with a circumferential fire-resistant seal (foaming). The concealed snap locks open the access panel when pressure is applied to the flap on the spring loaded latch side.

The access panel is equipped with a four-square lock and white collar.



### Dimensions

- Width: 600mm.
- Height: 550mm.
- Depth: 25mm.

### Capabilities

In non-load bearing ceilings of the fire resistance class:

– EI30 with cladding of 12.5mm, 15mm, 18mm, 20mm or 25mm.

Tested in accordance with the European Norms EN 1364-2 and EN 1634-3.

### Customized solutions

Customized sizes can be produced in various dimension upon enquiry.

## Access Door-Wall Mounted EI30

The Access Door Wall Mounted panel consists of aluminium profiles with plasterboard inlay thickness of 30mm (EI30).

Both outer and inner frame of the access panel consisting of four single frames, which are firmly connected due to a special welding process. Access panel is equipped with two catch-wires. In order to avoid accidents, this safety system has to be secured after each opening.

A joint gap of 2.5mm – visible between outer frame and door leaf, which is equipped with a circumferential fire-resistant seal (foaming). The concealed snap locks open the access panel when pressure is applied to the flap on the spring loaded latch side.

The access panel is equipped with a four-square lock and white collar.



### Dimensions

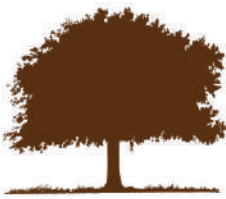
- Width: 600mm.
- Height: 600mm.
- Depth: 25mm.

### Capabilities

In non-bearing shaft walls/insulation panels of the fire resistance class EI30 with single-side cladding 30mm. Tested in accordance with the European Norms EN 1634-1 and EN1634-3.

### Customized solutions

Customized sizes can be produced in various dimension upon enquiry.



## PASSIVE HOUSE SYSTEMS

**Passive House Systems** are involved in airtightness in new builds and renovations since 2008. We are proud to be the distributors of the German manufactured products in the UK and Ireland.

We are continuously listening to our various customer types and improving our product range to meet increased levels of air tightness, vapour control and wind tightness.

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