

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

Contents

03 Why Airtightness & Vapour Control

04 Information Navigator

05 Products at a Glance

Products

06 Gerband Sd Control Membrane

07 Gerband 586 Airtightness Tape

Gerband Fortax 6400 Sealant (Internal)

08 PHS Split Release Window Tape

PHS Fusion Variable Plus Window Tape

09 PHS Astra Airtight Vapour Control Membrane

10 PHS Argo Plus Airtightness Tape

PHS Airtight Spray Sealing Foam

11 PHS Sd Variable Membrane

12 PHS Wolfy Tape

Gerband 587 Special Adhesive Tape

13 PHS 120 Breather Membrane

PHS 180 Roof Membrane

14 EPDM Membrane

Fasatan Sealant (External)

15 Winflex I (Interior) Window Tape

Gerband 386 High Tack Cloth Tape

16 PHS Down Light Hood (non-fire rated)

PHS Down Light Hood (fire rated)

17 PHS Primer Adhesive - Brush Applied

PHS Primer Adhesive - Spray Applied

18 PHS Airtight Liquid Membrane (Brush Applied)

PHS Airtight Liquid Membrane (Spray Applied)

19 PHS Double Sided Tape

PHS Butyl Sealing Tape

20 PHS Service Grommets

Inspections Doors (Non-Fire rated)

21 PHS Loft Stairs

22 Gerband 712 Aluminium Film Tape

Access Door Wall Mounted EI30



23 PHS Hi-Thermia Reflective Membrane

PHS Reflecta Aluminium Tape

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.

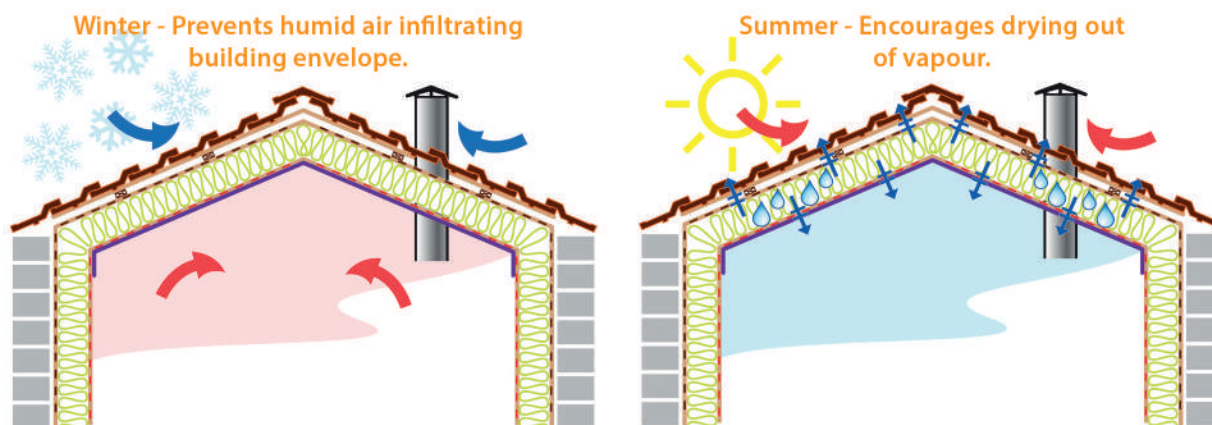
By specifying the PHS Airtightness System, not only do you get airtightness and moisture control, you get all of the following:

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



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.



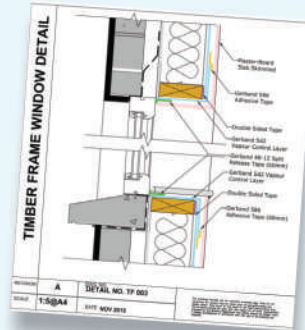
Material Safety Data Sheets

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.



Technical Drawings

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



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.



Engineers Ireland CPD Activities

Engineers Ireland provides a full suite of mentoring training for mentors and mentees, as well as the opportunity to develop foundational skills. CPD includes a wide variety of learning activities, many of which are free. Ask yourself if the learning activity contributes to your professional development. If the answer is yes, then it counts as CPD.

Passive House Systems, together with Engineers Ireland, offers an **Airtightness Installer Training Course**.

This course covers the theory behind Airtightness and what it achieves. Our experts will explain air leakage points in new and existing buildings with correct installation practices.

Passive House Systems Product House



...AND MORE

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 graphic-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.



Functional film
Non-woven fabric

Dimensions

- 1.5m 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.

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 ² (± 7%)
Tensile strength (DIN EN 12311-2)	
• lengthwise	≥ 100 N / 50 mm
• crosswise	≥ 80 N / 50 mm

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

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



**Quality
German
Manufacturing**

Dimensions

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

Gerband Fortax 6400 Sealant (Internal)

FORTAX® 6400 is a system component of the Gerband *roofite*® 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



**Quality
German
Manufacturing**

Contents

- 310ml Tube.
- 600ml Sausage.



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 Fusion Variable Plus Window Tape

PHS Fusion Variable Plus 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 Fusion Variable Plus 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.
- 15/75/60 (150mm) x 25m.
- 15/75/110 (200mm) x 25m.

Technical Data

Adhesive:	Modified acrylate dispersion, solvent-free, 220g/m ²
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 Astra Airtight Vapour Control Membrane

PHS Astra Airtight Vapour Control Membrane enables airtightness and vapour control in roof and wall constructions.

PHS Astra Airtight Vapour Control has an optimum fixed vapour resistance level of Sd 10m. This allows for an excellent level of vapour control by preventing diffusion of internal vapour into the building envelope back in winter and allowing diffusion in summer.

This prevents a build-up of condensed water vapour within the building envelope, that facilitates mildew growth and constructional damage.

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

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**.
- Store in dry rooms from +5°C to +40°C, protected from UV-radiation.

Technical Details

Mass per unit	85g/m ² , +10, -0≥60N/50mm, EN1849-2	
Resistance to water penetration	Passed, EN13984 (EN1928 Method A)	
Water vapour transmission rate	10m, EN1931	
Reaction to fire	Class E,	EN13501-1
Tensile property max. force (MD)	≥100N/50mm,	EN13984
Tensile property max. force (CD)		↓
Tensile property elongation (MD)	≥70N%,	EN13984
Tensile property elongation (CD)		↓3984
Resistance to tearing (MD)	≥90N,	EN13984
Resistance to tearing (CD)		↓3984
Ageing	Passed,	EN1296
Alkali resistance	NPD,	EN13984
Air permeability	0.00, EN12114	
Shear resistance of joints	NPD,	EN12317-2
Water tightness of seams	NPD	
Resistance to impact	NPD,	EN12691
Hazardous substances	No	
Temperature resistance	-40C/+100C	

Dimensions

- 1.5m x 50m.

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.

Carrier

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



PHS Argo Plus Airtightness Tape

PHS Argo Plus Joint Tape is a universal airtightness tape with a low-density polyethylene film backing. It is very pliable and stretchable. It is designed to work with PHS Vapour Control Membranes. 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. The tape offers a permanent adhesion with a high initial tack.

PHS Argo Plus 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 Airtight Spray Sealing Foam

PHS Spray Sealing Foam has been specially developed to form an airtight, thermal & sound insulating interface between construction components.

Application

- PHS Spray Sealing Foam adheres to all common building materials, with the exception of polyethylene, silicone, oils and greases, mold release agents, etc.
- PHS Spray Foam can be processed at temperatures from + 5 ° C to + 30 ° C.
- The hardened foam is elastic, predominantly closed-cell, rot-proof, moisture-proof, temperature-resistant from -50 ° C to + 100 ° C.
- It is resistant to aging, but not to UV radiation.
- PHS Spray Sealing Foam offers excellent thermal and sound insulation values.

Technical Data

Application Area	Up to 45 liters
Joint cross-section approx. 10x1.5cm	Up to 13m
Cellularity	Good
Tack free time	Approx. 5-10min
Can be cut according to (20mm strand)	Approx. 10-12min
Cured after (20mm strand)	Approx. 12h
Processing temperature	+5C to +30C

Optimal processing temperature	+20C to +25C
Tensile strength (DIN 53430)	5-6 N/cm ²
Stretching (DIN 53430)	Approx 30%
Shear strength (DIN 53427)	3-4 N/cm ²
Strain at 10% compression (DIN53421)	1-2 N/cm ²
Water absorption (DIN 53433)	1.4 Vol.-%
Thermal conductivity (DIN 52612)	0.035 W/mK
Air permeability	airtight up to 1000 Pa
Temperature resistance of cured strand	-50C to +80C
Bonding	-50C to +100C



Can Size
• 750ml.

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

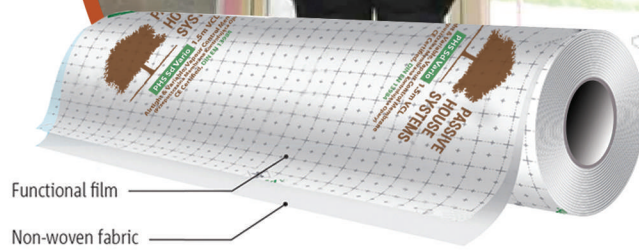
- Store in dry rooms from +5C to +25C, protected from UV-radiation.
- The membrane should be applied perpendicular to the direction of the application surface i.e. studs, rafters and joists.
- The membrane should be fixed with staples every 150mm or PHS Double Sided tape.
- PHS Argo Airtightness Tape or a PHS grommet should be used for penetrations.
- For bonding barrier overlaps, penetrations and repair spots, PHS Argo Airtightness Tape or a similar tape 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 Wolfy Tape

PHS Wolfy is a single-sided adhesive tape for interior and exterior use according to DIN 4108.

For the durable bonding of commercial vapour control layers and membranes and for the windproof attachment of roofing underlay, roofing membranes and façade membranes. Perfect for partly open façades.

Technical Data

Adhesive	Acrylate dispersion, Solvent Free (EC1) ^{PLUS}
Adhesive coating	230g/m ² , or customised
Processing temperature	From -10°C
Temperature resistance	-40°C to +100°C
Carrier material	UV-stabilised special foil
Liner	Silicon paper
Adhesive strength	DIN EN 1939 ca. 35N/25mm
Thickness	0.30mm (without liner)
Storage	15-25°C with rH 40-60%

Dimensions

- 60mm x 25m.
- Additional widths available but subject to demand.



Characteristics

- Used for indoors and outdoors sealings.
- Solvent Free (EC1)^{PLUS}.
- Application Temperatures -10°C to +40°C.
- Excellent immediate adhesion.
- In accordance with DIN 4108-11.
- Lifetime adhesion.

Gerband 587 Special Adhesive Tape

Gerband 587 Special Adhesive Tape is an external membrane tape that is permanently resistant to moisture. It seals all known pitched roof underlay and facade 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.
- Additional widths available but subject to demand.

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

PHS 120 Roof & Façade Breather Membrane

The PHS 120 Roof & Façade Breather Membrane is the Next Generation of High-Performance vapour permeable Underlay.

With an impressive range of characteristics such as high Vapour Permeability, Extreme Watertightness, High Nail Tear Resistance and Thermostability.

PHS 120 Roof & Façade Breather Membrane offers superior protection against condensation risk and extreme resistance against pelting rain. PHS 120 is a Diffusion-Open vapour permeable membrane. When sealed at the overlaps and other appropriate building components, the PHS 120 Roof & Façade Breather Membrane provides a windtight environment underneath resulting in optimum thermal performance of the insulation.

Installation of membrane can be carried out in all conditions normal to pitched roofing work. In roof construction it is important to remember that the underlay is the second line of defence in excluding water penetrating through the roof. Local roofing requirements shall take precedence over these instructions.



Dimensions
• 1.5m x 50m.

Technical Data

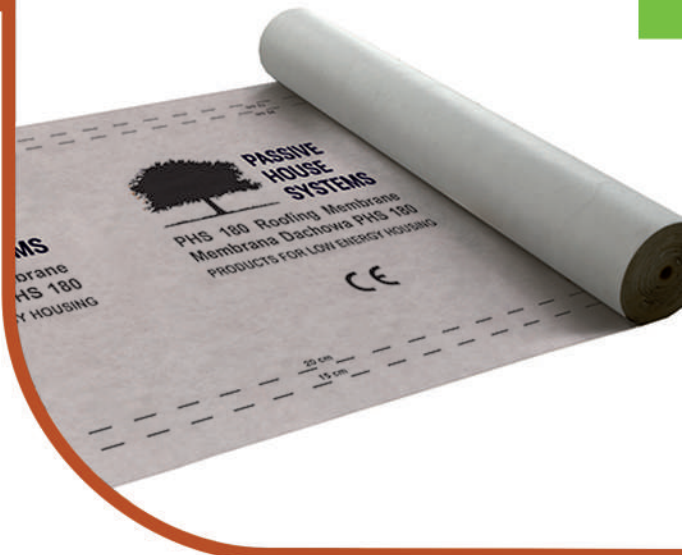
Weight:	120g/m ²
Foil thickness:	0.82mm
Sd value:	aprox. 0.017m
Tensile Strength	
MD	200N/ 60%
CD	140N/ 70%

Tear resistance (nail):	
MD	101N
CD	120N
UV exposure:	max. 7 weeks
Reaction on fire:	Class E
Temperature resistance:	-40C to +80C
Low temp. flexibility:	-40C

PHS 180 Roof Membrane

The PHS Roof 180 breather membrane is the Next Generation of High-Performance vapour permeable Underlay.

With an impressive range of characteristics such as high Vapour Permeability, Extreme Watertightness, High Nail Tear Resistance and Thermostability. PHS Roof 180 offers superior protection against condensation risk and extreme resistance against pelting rain. PHS Roof 180 is a Diffusion-Open vapour permeable membrane. When sealed at the overlaps and other appropriate building components, the PHS Roof 180 membrane provides a windtight environment underneath resulting in optimum thermal performance of the insulation.



Dimensions
• 1.5m x 50m.

Technical Data

Weight:	180g/m ²
Foil thickness:	0.82mm
Sd value:	approx. 0.021m
Air permeability:	Max. 0.05m ³ / (m ² x h x 50Pa), EN 12114
Water vapour diffusion:	0.03m, EN ISO 12572C
Water tightness:	Class W1, EN 1928A
Tensile strength:	
MD	350N
CD	240N
Elongation:	
MD	100N
CD	120N

Tear resistance (nail):	
MD	230N
CD	290N
UV exposure:	max. 7 weeks
Reaction on fire:	Class F, EN 11925-2
Temperature resistance:	-40°C to +80°C
Low temp. flexibility:	-40°C, EN 1109

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, partially adhesive 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.

Fasatan Sealant (External)

Fasatan 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.

Fasatan 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 ³ ; 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 ² ; DIN 52 455 NWT-1-A2-100
Tensile strength (film):	approx. 1.0N / mm ² ; 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

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

Gerband 386 High Tack Cloth Tape

Gerband 386 seals all known underlay and façade membranes, even surfaces which are a little rough.

It adheres very good on wood, bricks and solid concrete surfaces. Furthermore it is used as a repair tape for small damages or fissures in roof lining membranes.

Product description

Carrier

- Special non-woven fabric with functional coating,
- Pliant and dimensionally stable,
- Plasterable and paintable,
- Slip resistant surface when wet,
- Good UV resistance.

Adhesive

- Polyacrylate adhesive,
- Extremely high initial and permanent adhesion,
- Very high tack,
- Good shearing resistance and heat resistance,
- Very good ageing resistance.



Dimensions

- Width: 60, 100mm.
- Length: 25m.

Technical Data

Thickness (DIN EN 1942)	0.68 mm
Tensile Strength (DIN EN 14410)	≥ 100 N / 25 mm
Elongation at break (DIN EN 14410)	50 - 100 %
Adhesion (DIN EN 1939)	≥ 35 N / 25 mm
Temperature Range	-30°C to +90 °C
Core Diameter	76,5 mm
Elongation at break (DIN EN 14410)	permanent resistant

PHS Down Light Hood (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.

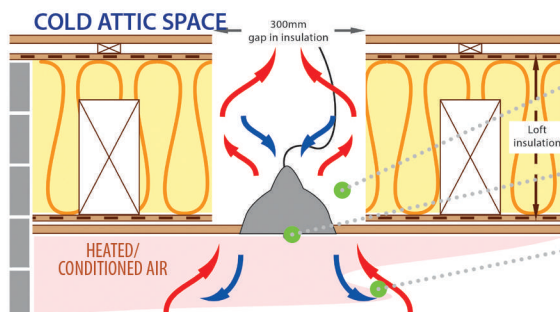


Technical Data

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

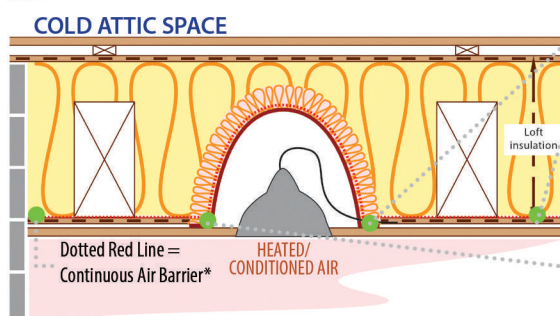
PHS Down Light Hood (Fire rated)

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 Primer Adhesive -Brush Applied

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

It reinforces porous or sandy materials for the subsequent application of 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 ²
Stone/concrete	approx. 12 m ²



Contents
• 500ml.

PHS Primer Adhesive -Spray Applied

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 ³
Processing temperature:	+5°C to +25°C
Temperature resistance:	-30°C to +90°C

PHS Airtight Liquid Membrane (Brush Applied)

PHS Airtight Liquid Membrane is a VOC free, water based, flexible, fibre reinforced polymer. It provides a unique and sustainable solution for airtight construction junctions in both new builds and retrofits. It is brush applied to create an uninterrupted airtight and vapourtight seal around penetrations, chases, floor to wall junctions, wall to ceiling junctions, and roof connections. PHS Airtight Liquid Membrane creates a seamless and continuous airtight and vapourtight seal over cracks and gaps. Because the seal perfectly follows the contours of the substrate and in combination with the high flexibility and superior adhesion, the connections remain airtight over a long period of time. It is a fast, flexible and durable solution for all airtight connections.

Technical Data

Color	blue (wet), black (dry)
Basis	waterborne polymer paste reinforced with fibre
Application temperature	+5°C
Storage temperature	+5°C to +20°C
Sd value	>10
Density	1.2kg/Litre
Airtightness	0.07m ³ /H.M (50Pa); EN 12114: 2000
Elongation	>230%, EN12311-1
Diffusion resistance	76584, EN12572
Adhesion on concrete	1.9N/mm ² , ISO4624



Contents

- 5kg Bucket.
- 4.5kg Bucket.

PHS Airtight Liquid Membrane (Spray Applied)

PHS Spray Airtight Liquid Membrane is a high-tech, water-based polymer dispersion that can be applied to various surfaces with an airless sprayer and that, when dry, forms a highly flexible, elastically airtight and vapour repellent membrane.

It provides a unique and sustainable solution for airtight construction junctions in both new builds and retrofits. It permanently seals connections:

- wall to floor,
- wall to ceiling,
- window and door jambs,
- pipe and ducting penetrations,
- general construction joints.

Properties

- Airtight and vapor barrier.
- Ideal for large construction sites and surfaces.
- Suitable for renovation and newbuilds.
- Very flexible with good adhesion on many porous materials.
- Good adhesion on slightly moist substrates.
- Permanently elastic.
- Meets the European VOC Directive 2004/42/EC.



Contents

- 10kg Bucket.

Technical Data

Structure	Water based, fibre reinforced polymer paste
Specific gravity	ca. 1.2 kg/l
Wet consumption	+/- 1kg/m ²
Min. processing temperature	From +5C
Drying time	30-120min, depending on humidity and surface
Shelf life	12 months, at temperature between 5 and 25C
Volatile organic compounds (VOCs)	none
Packaging	10kg

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.

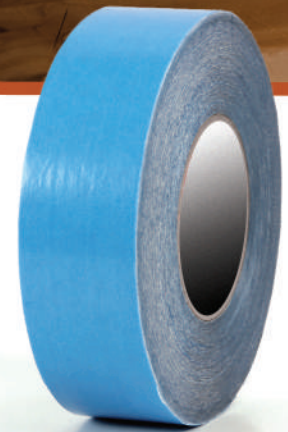
Technical Data

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	30mm
Roll length (standard)	50m
Colour	Transparent
Storage	in dry rooms from +5 °C to +25 °C



Dimensions

- 19mm x50m.
- 30mm x 50m.



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

- 19mm x50m.
- Additional widths available but subject to demand.

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

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.

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

Advantages

- 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.



Inspections Doors (Non-Fire rated)

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

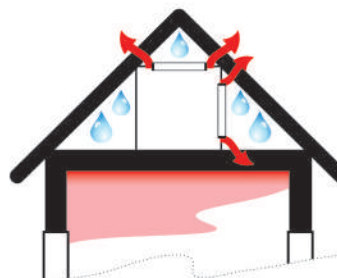
The Inspection Door is ideal for quickly and safely accessing storage space behind, for example, a knee wall attic space. Supplied with a 2-point lock and a short reach operating pole for ease of use.

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.
- 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/m ² .K; Ref: ISO 6949			
Airtightness:	Class 4; Ref: EN 1026			



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.

PHS Loft Stairs

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 it's 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.

Technical Data

	PHS ECO	PHS ECO PLUS
Insulation Thickness	80mm	133mm
Tested U-value with ISO - top lid	0,37W / m ² K	0,32W / m ² K
Tested U-value without upper lid	0.59W / m ² K	0,40W / m ² K
Certification	DIN EN 14975:2007	
Air tightness Level	class 4 (EN 1026), i.e. Q100 ≤ 0.1m ³ /hr.m ²	
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	
Load bearing Capacity	150kg	
Dimensions	1190 x 590 x 2800mm (Other dimensions available)	
Optional Extras	ISO Top lid with 80mm more insulation, (500mm higher) • Loft Guard rail. • Installation air tightness kit.	

Dimensions

PHS ECO PLUS Loft Stairs	1190mm x 590mm x 2800mm
PHS ECO Loft Stairs	1190mm x 590mm x 2800mm 1130mm x 540mm x 2750mm



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 mm ² / +70C

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.

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.



Dimensions

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

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.

Technical Data

Thermal performance / Reflectivity:	0.973
Emissivity:	0.027
Reaction to Fire:	Class E, EN ISO 11925-2, Class EN 13501-1
Water Thightness:	Passed, EN1928 (Method A, Class W1)
Water Vapour Resistance:	14.645 m2.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 / m2
Thickness:	0.12mm
Air permability:	Airtight, EN12114



Dimensions
• 1.2 x 50m.

PHS Reflecta Aluminium Tape

PHS Reflecta ensures a long-lasting bond with common construction substrates. PHS Reflecta provides an effective airtight seal at joints and penetrations. Combined with it is 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.

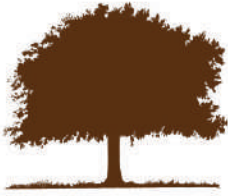
When used to tape foil faced insulation externally, PHS Reflecta achieves a windtight layer that prevents wind-washing, increasing the thermal performance of insulation. PHS Reflecta has a high tear, water and aging resistance making it highly durable.

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.



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.

While headquartered in Cork we provide an unrivalled service to our customers in the UK and Ireland, especially with product support and supply.

Contact Us to find your nearest stockist.

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