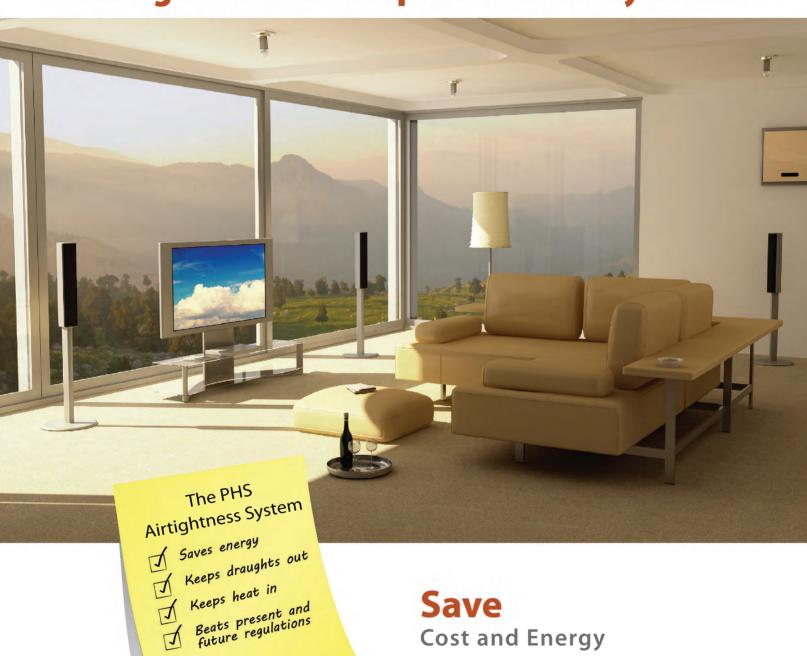




Airtightness and Vapour Control Systems



Cost and Energy

Prevent

Air Leakage

Protect

Against Structural Damage

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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.

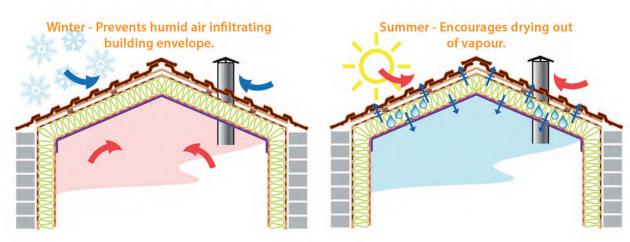
By specifying the PHS Airtightness System, not only do you get airtightness and moisture control, you get all of the following:

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 be tween 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



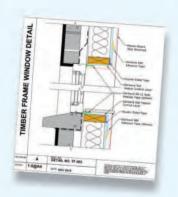
Product Datasheets

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 konwledge and competence.

PHS Products House





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 breake (DIN EN 14410)	* 150% to 200%
Release liner	silicone paper
Rype 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



Gerband Fortax 6400 Sealant (Internal)

FORTAX® 6400 is a system component of the Gerband *rooftite*® 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
Shelflife	12 months in unopened cartridge / sausage
Ecology	no environmental or indoor toxins, solvent-free
Disposal	safely on the domestic waste



· 600ml Sausage.



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.



• 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.



· Width: 50, 75, 100mm.

· Length: 50m.

Technical Data

Total thickness (DIN EN 1942)*:

Tensile strength (DIN EN 14410)*:

Elongation at break (DIN EN 14410)*:

Adhesion (DIN EN 1939)*:

Temperature range:

-40C to +140C

Heat resistance (short-term):

Shearing resistance:

>24h; 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 graphic-matrix to facilitate installation.

Like all of Gerband products, it is extremely durable.

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 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 t o +80 °C
Grammage density	95 g / m2 (± 7%)
Tensile strength (DIN EN 12311-2)	
 lengthwise 	\geq 100 N / 50 mm
• crosswise	≥ 80 N / 50 mm



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 ENEV and construction standards.

Elongation at break (DIN EN 12311-2	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



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 is suitable for internal use on the condition that it is 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.

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

Technical Data

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

Suitable Membranes

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



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

150mm x 25m.



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.



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 airtighness 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

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 4.5m.

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.

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.

Technical Data

Backing	double-layered laminated film
Colour	white, printed
sd-value	4.5m
Fire performance (DIN EN 13501-1)	Class F, corresponds B2 according to DIN 4102
Dimension	1.5 m x 50 m
CE certificate	passed
Temperature range	-20 °C t o +80 °C
Grammage density	85 g/m2(±7%)
Tensile strength (DIN EN 12311-2)	
• lengthwise	\geq 100 N / 50 mm
 crosswise 	≥60 N/50 mm



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.

Tear strength (DIN EN 12340-1)	
• lengthwise	≥ 90N
• crosswise	≥ 90N
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 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.
- 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*.



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.

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

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 Crossv	vise: >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 ²
Stone/concrete	approx. 12 m ²



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.



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 Double Sided Tape

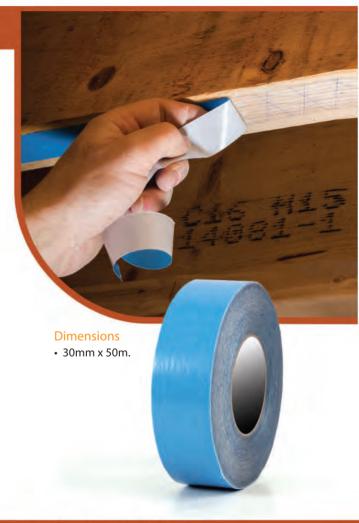
PHS Double Sided Tape is a ready-to-use polyacrylate adhesive film.

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	



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.

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 / cm3; 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 / mm2; DIN 52 455 NWT-1-A2-100
Tensile strength (film):	approx. 1.0N / mm2; DIN 53 504



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.

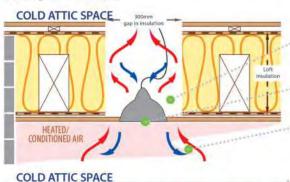


Technical Data

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.



Dotted Red Line =

Continuous Air Barrier*

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-Hight 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

/laterial	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

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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 0.79m²K/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 the building regulations in Ireland, England and Wales and Scotland.



• 1.2 x 50m.

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
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 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



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 / EN 1931	Pass
Durability against alkali	Annex C	NPD



Dimensions

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

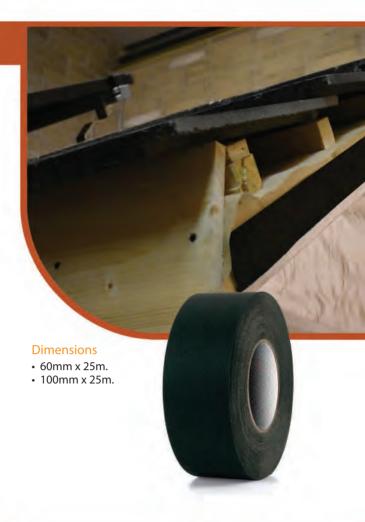


PHS Fasada Tape

PHS Fasada Tape seals all common roof and facade membranes with closed and rough surfaces outdoors. It is also an excellent solution for sealing round or angular penetrations of diffusion-open, or diffusion-tight roof-lining membranes in pitched roof and facade areas according to DIN 4108 part 7. Our Tape is also perfect as repairing tape for small damage or rips in roof-lining, airtight membranes. It adheres very well to wood, bricks and non-sandy concrete surfaces.

Technical Data

Backing	Non-woven fabric	
Thickness, backing	0.46mm	
Total thickness (DIN EN 1942)*	0.68mm	
Tensile strength (DIN EN 14410)*	>100N/25mm	
Elongation at break (DIN EN 14410)*	50-100%	
Release liner	Silicone paper	
Types of adhesive	Polyacrylate adhesive	
Adhesion (DIN EN 1939)	>35N/25mm	
Tack	Very high	
Moisture resistance	Permanent resistance	
Temperature range	-30C to +90C	
Application temperature	+5C to +40C	
Color of fabric	Anthracite	



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

Dimensions

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

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



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 ENEV, 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.

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 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.



Technical Data

Adhesive: Modified acrylate dispersion, solvent-free, 220g/m² Processing temperature: From -5°C, ideal processing temperature +5°C to +35°C -40°C bis +80°C, storage at 15-25°C with rH 40-60% Temperature resistance: Carrier material: Special film with non-woven PP lamination UV resistance: Properties: moisture-variable sd 0,4 - 20m Alongside 190 -40/+80, crosswise 150 -30/+60, N/50mm Tensile strength: Alongside 100 -30/+60, crosswise 150 -50/+100, value in % Elongation at tear: W1 in regards to EN 1928 Watertightness:

• 15/75/60 (150mm) x 25m.

• 15/75/1100 (200mm) x 25m.



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<1m3/[h.m.(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.



• 25mm x 30m x 0.4mm.

Thickness:	0.8mm
Adhesive:	Butyl rubber adhesive
Peel adhesion:	>25N/25mm
Shear strength:	>50N/25mm
Elongation:	>400
Moisture paermability:	<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 tearresistant 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.





	Dimension	S	Adhesive		Adhesive		Adhesive
	Adhering to mem	brane.	Adh		Adh		Adh
ts	Diameter	15-22mm		25-32mm		42-55mm	
al	Product Code	GD 21	1	GD 22	1	GD 23	1
ern	Diameter	50-70mm		50-65mm		100-110m	nm
Fig.	Product Code	GD 50	1	PHS 50	×	PHS 100	X
	Diameter	50-70mm		75-90mm		100-110m	nm
	Product Code	RGD 50	1	RGD 75	1	RGD 100	1
	Diameter	125-135m	nm	150-165m	nm	200-220m	nm
	Product Code	RGD 125	1	RGD 150	1	RGD 200	1
	Diameter	4-8mm					
	Product Code	D 1	1				

*	Adhering to Maso	nry.	Adhesiv		Adhesiv		Adhesiv
ts	Diameter	4-8mm		25-32mm		50-70mm	
na me	Product Code	D1 FB	1	GD22 FB	1	RGD50 FB	1
err	Diameter	100-110m	nm	125-135		150-165	
E E	Product Code	RGD100 I	B 🗸	RGD125 FI	B 🗸	RGD150 FB	1

^{*} External Grommets available on request.

	Internal	External
Storage/shelf life	cool and dry	cool and dry
Processing temperature	from -5°C	from 4 ^o C
Temperature resistance	-20° C up to $+100^{\circ}$ 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



PHS 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.

PASSIFE PASSIF

Dimensions

• 1.5m x 50m.

Technical Data

Weight:	180g/m2
Foil thickness:	0.82mm
Sd value:	approx. 0.021m
Air permeability:	Max. 0.05m3 / (m2 x h x 50Pa), EN 12114
Water vapour diffusion:	0.03m, EN ISO 12572C
Water thightness:	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

Inspection Doors Non fire rated

The Passive House Systems Inspection Door prevents heat loss with it's 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





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 El30

The Access Door Ceiling Mounted panel consists of aluminium profiles with plasterboard inlay thickness of 12.5mm, 15mm, 18mm, 20mm or 25mm (El30).

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.



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

Capabilities

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

- El30 with cladding of 12.5mm, 15mm, 18mm, 20mm or 25mm.

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

Access Door-Wall Mounted El30

The Access Door Wall Mounted panel consists of aluminium profiles with plasterboard inlay thickness of 30mm (El30).

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 El30 with single-side cladding 30mm. Tested in accordance with the European Norms EN 1634-1 and EN1634-3.





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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