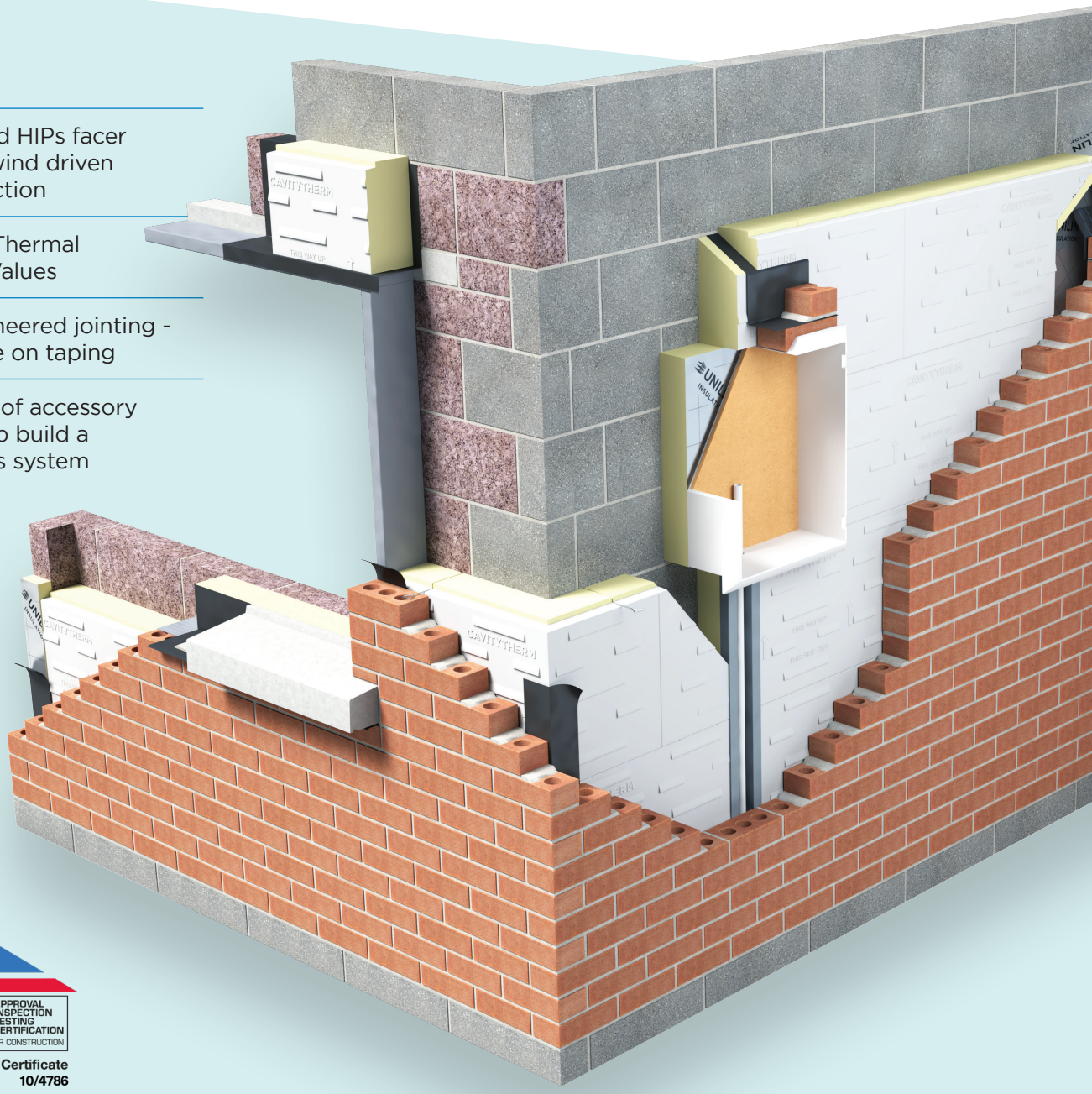
CAVITYTHERM BUILT IN FULL FILL WALL INSULATION

Full Fill Cavity Walls

CT/PIR

- Engineered HIPs facer provides wind driven rain protection
- Excellent Thermal Bridging Values
- Fully engineered jointing - no reliance on taping
- Full range of accessory pieces help build a continuous system



BBA APPROVAL INSPECTION TESTING CERTIFICATION
TECHNICAL APPROVALS FOR CONSTRUCTION

Agrément Certificate
10/4786

UNILIN INSULATION

Real performance on site

CavityTherm is a high performance composite board of enhanced PIR with a lambda value of 0.021 W/mK, for full fill cavity wall applications.

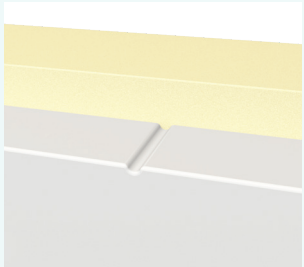
CavityTherm's unique engineered profiled facing directs any moisture that might penetrate the external wall down the protective facing and back onto the external leaf, giving added protection from the ever increasing occurrence of wind driven rain as a result of climate change.

The board includes specifically designed rebated edge detailing on all four edges to allow the system to tightly interlock when installed. This engineered jointing of the insulation layer, with the addition of bespoke ancillary pieces to insulate effectively around services such as hockey sticks, meter boxes and corner details, ensures continuity and results in excellent Thermal Bridging detailing.

Key Features

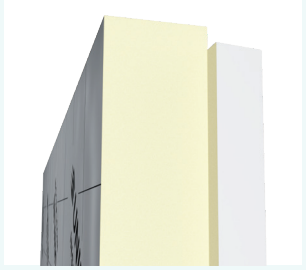
Engineered HIPS skin redirects moisture back onto external leaf

Engineered jointing on all edges to provide continuity of insulation layer



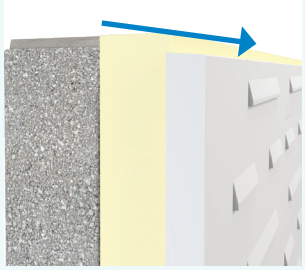
Preformed slots for wall ties that prevent board creep

Flutes to deflect moisture onto outer leaf

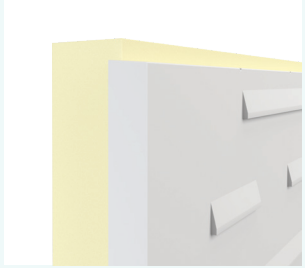


High performance core: 0.021 W/mk thermal conductivity

NSAI and BBA approved



Edging sloped towards outer leaf to ensure wall ties sloped down



Raised insulation at junction acts as a barrier against mortar squeeze

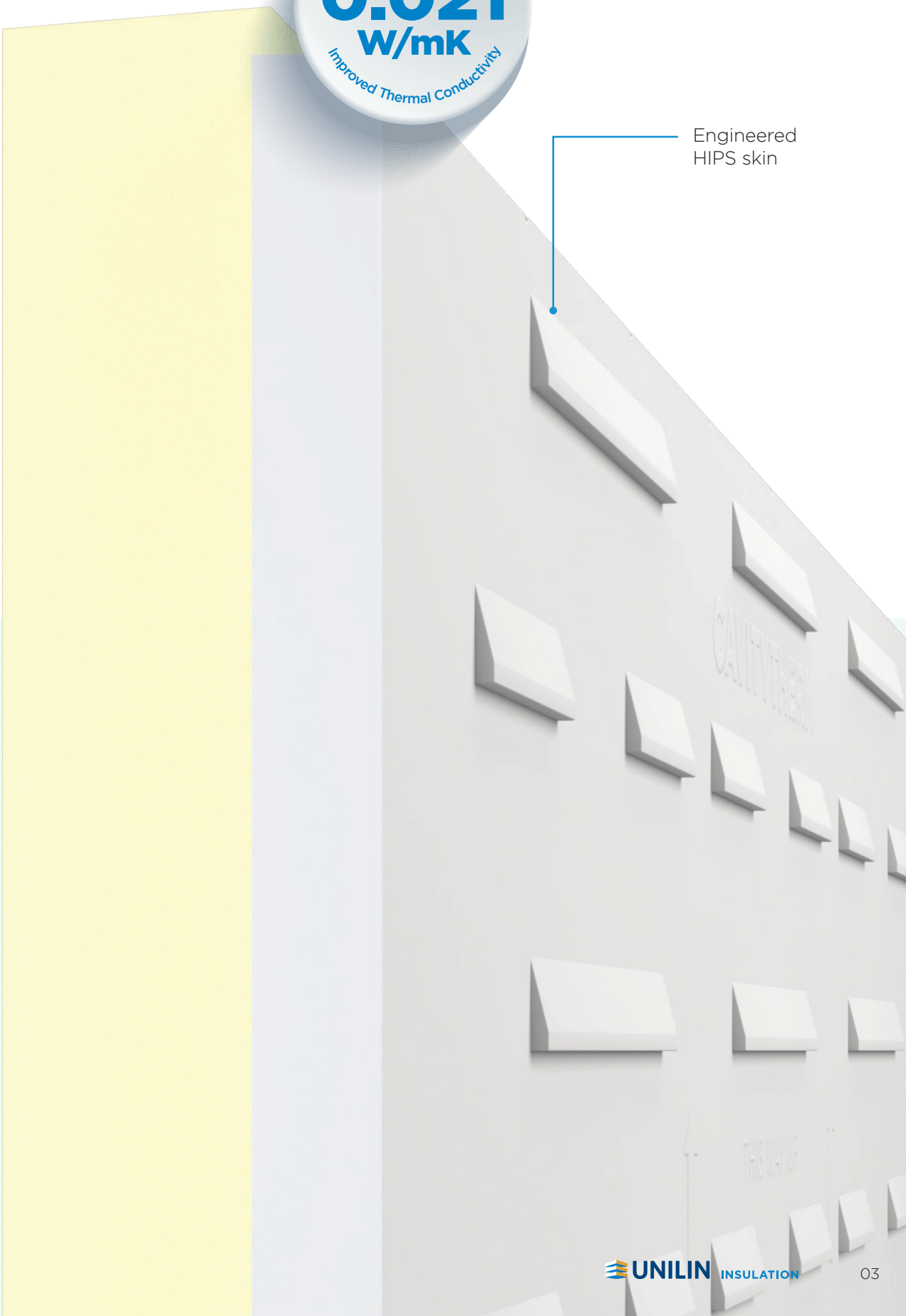
WALLS

Improved Thermal Conductivity

0.021 W/mK

Improved Thermal Conductivity

Engineered HIPS skin



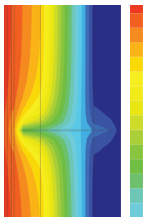
Why CavityTherm?

Part L 2021 edition sees targets set for fabric energy efficiency. (FEES)

FEES was incorporated into The Code for Sustainable Homes back in 2010 and SAP reports would have quoted a FEES score as part of the results from the 2009 version. SAP 10 maintains the priority of providing an energy efficient building fabric before accounting for energy input. The fabric energy efficiency standard is aimed at reducing energy loss no matter the source.

CavityTherm built into a traditional 110mm cavity using traditional foundation, building skills and materials can achieve a 0.15 W/m^{2}K surpassing the target for Future Homes Standard. A practical, affordable solution to low energy design, that minimises material use and resultant embodied carbon (see Unilin ECO360 range of bio-enhanced insulation).

It's not just about simple U-Values
Insulation performance is no longer about simple U-Values. How insulation interconnects with other elements and junctions in the design is critical. The aim is to achieve a continuous thermal layer that minimises heat loss at those junctions. This is thermal bridging and is measured and accounted for as a Y-Value within SAP calculation. For full information on Thermal Bridging and CavityTherm see unilininsulation.co.uk or contact our Technical Team.



The Affordable Solution

Apart from the practical reasons for maintaining the traditional cavity width, there are also cost implications that must be considered when the decision has been taken to widen a cavity over 150mm.

There are cost implications that must be considered when the decision has been taken to widen a cavity to insert a greater thickness of insulation.

In the publication issued by the Zero Carbon Hub, 'Defining a Fabric Energy Efficiency Standard for zero carbon homes Appendix D Cost analysis', the cost involved in increasing a wall cavity from 85mm to 210mm added an additional £2,570.00 to a typical semi-detached and £4,512.00 to a detached property.

To increase a cavity out to 200mm on the semi-detached property could add up to £28.25 per square metre of external wall area - before insulation costs.

WALLS

The Technical Solution Achieving Fabric Energy Efficiency Standards

Building to 2020 regulations or looking towards Future Homes Standards and Passive levels, CavityTherm in a traditional brick wall with a reasonable cavity width will get you there!

Achieved U-Values

Element	U-Values (W/m^2k)
Walls	0.14
Roofs	0.12
Floors	0.15
Windows	1.20
Doors	1.50
Thermal Bridging	Y=0.05
Air Permeability	$5m^3/hr/m^2$

FEES Targets (Conducted in a range of dwelling types)

U-Value	Unit (W/m^2k)
Walls	0.15 - 0.18 W/m^2K
Roofs	0.13 W/m^2K
Floors	0.13 - 0.15 W/m^2K
Windows	1.2 - 1.4 W/m^2K
Doors	1.0 - 1.4 W/m^2K
Thermal Bridging	0.04 - 0.07 W/m^2K
Air Permeability	5.0 - 5.2 $m^3/hr/m^2$@50Pa

The Practical Solution

CavityTherm is proven to provide the most cost effective answer, not only reaching Future Homes Standard fabric U-Values but also achieving Thermal Bridging targets.

CavityTherm built into a traditional 100-150mm cavity using standard foundation widths, building skills and local materials achieves U-Values down to 0.12 W/m^2K.

You design your homes to a high standard. They are homes that people want, the traditional look, using the skills and materials that are familiar to you and your customers.

With the skills of the traditional builder, attention to detail and CavityTherm from Unilin, we've got it sorted!

Full range of accessory pieces available to build a continuous system

CAVITYTHERM BUILT IN FULL FILL WALL INSULATION

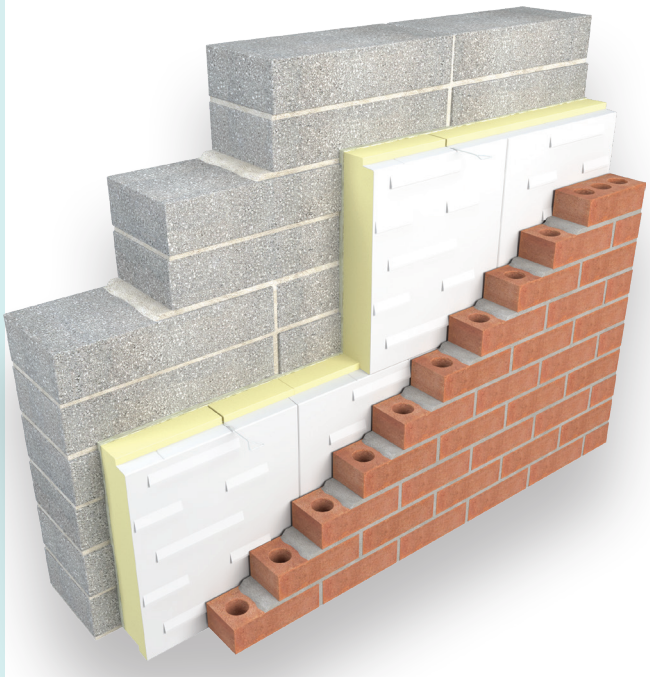
Full Fill Cavity Walls

CT/PIR

CavityTherm is an innovative built-in insulation for traditional walls that achieves passive level U-Values as low as 0.12 W/m^{2}K with excellent thermal bridging detailing in cavities less than 150mm wide.

Benefits

- Engineered HIPs facer provides wind driven rain protection
- Moisture redirected to outer surface
- Prepositioned slots for sloping wall ties - no creep
- Fully engineered jointing - no reliance on taping
- Full range of accessory pieces build continuous system
- Excellent Thermal Bridging values



CavityTherm's unique engineered profiled facing directs any moisture that might penetrate the external wall down the protective facing and back onto the external leaf, giving added protection from wind driven rain.

The board includes specifically designed rebated edge detailing on all four edges to allow the system to tightly interlock when installed. This engineered jointing of the insulation layer ensures continuity and results in excellent thermal bridging detailing.

Specification Clause

The built in wall insulation system shall be_ _ _mm CavityTherm manufactured to EN 13165 by Unilin, including corner boards and ancillary detail components comprising of free engineered jointed rigid Polyisocyanurate (PIR) with a lamba value of 0.021 W/mK with heavy low emissivity foil facings and engineered outer skin to achieve a U-Value of_ _ _W/m2K for the wall element.

An Environmental Product Declaration (EPD), certified by IGBC is available for this product. Please contact technical support for further details.

Refer to NBS clause F30 150, F30 12. To be installed in accordance with instructions issued by Unilin.

Typical Physical Characteristics

Property	Units
Density	30 kg/m^3
Compressive Strength	>100 kPa @ 10%
Thermal Conductivity	0.021 W/mK
Service Temperature	20°C - +100°C

THERMAL PERFORMANCE

CT/PIR

Typical U-Values

CERTIFICATE CS/nnnn-n
U Value Competency Scheme

Table 1
U-Value calculations to EN ISO:6946
CT/PIR
Full Fill Cavity Walls

Build up:

- Plasterboard on dabs
- 100mm Inner Leaf Blockwork
- CT/PIR
- Unventilated Cavity
- Brick

Thickness (mm)

Block Lambda	100mm	110mm	125mm	150mm
0.11	0.17	0.16	0.14	0.12
0.15	0.18	0.16	0.15	0.12
0.46	0.19	0.17	0.15	0.13
1.13	0.19	0.18	0.16	0.13

CavityTherm				
Length (mm)	1200			
Width (mm)	450			
Thickness (mm)	100	110	125	150
Typical R-value*	4.50	5.00	5.70	6.90

*PIR only

1
The profile edge of the boards allows wall ties to be positioned sloped down to the outer skin, whilst acting as a template for mortar on the inner skin.

2
CavityTherm has gas tight facings - with one additional face bonded to provide a drainage plane, directing moisture onto the outer leaf.

3
CavityTherm's specially designed profile maintains a residual channel, protecting the structure.

4
Installing CavityTherm gives U-Values that are indicative of targets set to achieve the higher levels for the future homes and passive standards - but within traditional construction allowing the architect to design low carbon homes and maintain an overall cavity width of 100mm.

ACCESSORIES

CT/PIR

The Complete Cavity Wall System

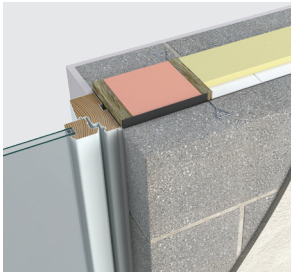
CavityTherm provides a 'system' that delivers on U-Values, is practical, and with a full range of innovative detailing accessories – it delivers on continuity.

Safe-R Close-R

A high performance EN fire-rated cavity closer providing compliance with structural and thermal regulations in the UK. Achieved in excess of 4 hour fire rating in a 150mm cavity when tested to EN1366-4.

Size
1200mm x 200mm

Thicknesses
100mm, 125mm, 150mm,
75mm Return block

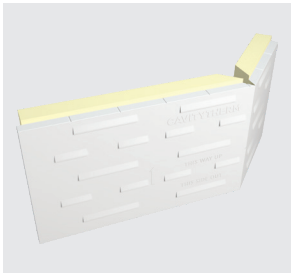


Preformed Corner Panels

A preformed panel of CavityTherm that folds to provide a 90° corner either external or internal. The corner boards ensure excellent detailing and provide a template for setting out of outer brickwork.

Size
1200mm x 450mm

Thicknesses*
100mm, 110mm, 125mm, 150mm

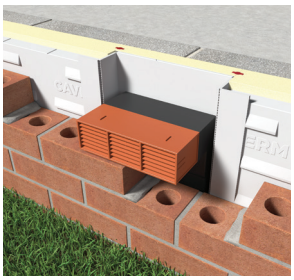


Service Void Panels

A preformed panel that creates an insulated Service Void for Periscopic Floor Vents in suspended floor situations.

Size
375mm x 265mm

Thicknesses
45mm



Meter Box Panels

The preformed meter box accessory allows a recess space for placement of meter box, leaving the insulation to run in a continuous plane.

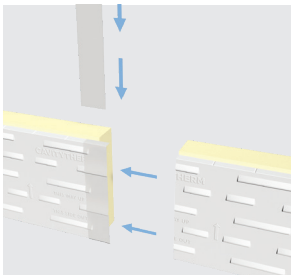
Size
1200mm x 600mm

Thicknesses
50mm, 75mm, 100mm

Jointing Strip

When building from the inner leaf to the outer leaf, board joints can be protected and taped with the jointing strips.

Size
100mm x 450mm



Hockey Stick Insulation

The Hockey service voids allows for easy access to the cable that supplies the meter box and is preformed to fit the insulation.

Size
1200mm

Thicknesses
100mm, 110mm,
125mm, 150mm

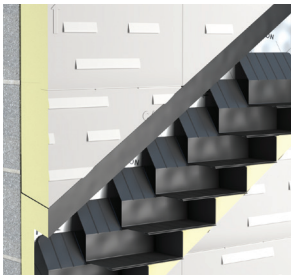
Cavity Tray Channel

An insulated channel to allow for insulation continuity around stepped cavity trays at gable junctions.

1200mm	L	Channel Length
100mm	C	Cavity width
350mm	IVH	Internal Void Height
60mm	T	PIR Insulation Thickness

Size
1200mm L x 100mm C x
350mm IVH x 60mm T

Thicknesses
100mm, 110mm,
125mm, 150mm



Top Panel

A CavityTherm half-board that is used to finish wall insulation heights when a full board is not required, reducing cost and wastage on site.

Size
1200mm x 225mm

Thicknesses
100mm, 110mm,
125mm, 150mm

Riser Panel

A CavityTherm half-board that is positioned below the DPC at floor levels and allows for the recommended overlap between wall and floor insulation boosting thermal bridging performance and cutting waste.

Size
1200mm x 225mm

Thicknesses
100mm, 125mm,
150mm

ACCREDITED DETAILING

CT/PIR

Like all other inputs into a building energy calculation, the way that insulation is installed to avoid thermal bridging has a numerical input into the software which is called a Y-Value.

A set of 'good practice' details have been available in the form of 'Accredited Construction Details for Part L' (ACDs) published by the Department for Levelling Up,Housing & Communities (DLUHC) in the UK. These details are a set of design drawings for the junctions listed in Appendix K Table K1 in the SAP10 Manual which are most prone to heat loss. They detail, using traditionally used UK construction methods and materials, how insulation should be installed at these critical junctions in order to improve not only the heat loss but also airtightness results. This also helps reduce the risk of condensation by ensuring surface temperatures are within a safe margin.

What is Thermal Bridging?
Thermal bridging occurs in small areas where the insulation level is reduced significantly compared with the remainder of the element. They may be 'Repeating,' 'Random,' or 'Non-Repeating.'

Where does Non-Repeating occur?
Non-repeating thermal bridges typically occur at the junctions between plane building elements, e.g. at wall / roof, wall / floor junctions, and around openings, e.g. at window jambs, sills and also corners where the continuity of the insulation is interrupted.

How is it accounted for?
Thermal bridges are calculated as a linear thermal transmittance value - PSI (Ψ) measured in W/mK. SAP is the software that is used to calculate a dwellings EPC rating. Within SAP Thermal bridging through junctions are accounted for as a 'Y-Value.'

Are all junctions accounted for within SAP?
No. The major critical junctions are those that account for the majority of the heat loss. However reasonable care should be taken to insulate all bridges that occur on-site to avoid condensation.

Thermal Bridging & Airtightness

A comparison between the Y-Value and a hole in the construction

Y= 0.20

The equivalent of an open 'Garage Door' 2.1m x 3.3m (6.93m²) opening.

Y= 0.08

The equivalent of an open 'Patio Door' 2.1m x 1.8m (3.78m²) opening.

Y= 0.03

The equivalent of an open 'Window' 1.25m x 1.25m (1.56m²) opening

For full CAD details and Thermal Bridging certificates specifically for UK constructions visit **www.unilininsulation.co.uk**

THERMAL BRIDGING

CT/PIR

A major factor in the performance of the building fabric is not simply the amount of insulation you install, but how it interconnects with other components and the other insulated elements within the design.

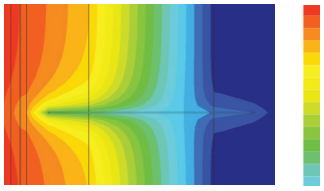
Semi-Detached House - TER 18.24

Total Envelope Area = 190.580

Which details to use?		Accredited	UNILIN
Junction Detail	Length (m)	Ψ (W/m²K)	Ψ (W/m²K)
Lintels	13.970	0.30	0.03
Sills	12.170	0.04	0.04
Jamb	29.550	0.05	0.02
Ground Floor	19.600	0.16	0.05
Intermediate Floor	19.600	0.07	0.00
Corner (normal)	20.400	0.09	0.04
Corner (inverted)	10.200	-0.09	-0.06
Ceiling (insulation at eases)	11.000	0.06	0.05
Ceiling (insulation at gables)	8.900	0.24	0.05
Party Ground Floor	8.900	0.04	0.04
Party Wall (intermediate floor)	8.900	0.00	0.00
Party Ceiling (insulation at ceiling)	8.900	0.06	0.05
Total L x Ψ		15.27	4.48
Y-Value (L x Ψ / total area)		0.08	*0.02

*Ψ Based on Lightweight Block

Unilin has published a full set of accredited PSI values based on the DLUHC Accredited Details for Construction. Using these figures will allow most properties to use the Y-Value of better than 0.05 which is targeted under FEES. For a set of full downloadable details and information on how to use them in your design go to unilininsulation.co.uk



Building junctions, where building elements meet such as at corners or reveals, are less well insulated than the main element. With Unilin Accredited Details insulation continuity is assured.

It has been estimated that up to 30% of the heatloss in a well insulated house is through these 'Non Repeating Thermal Bridges' at wall/floor junctions, corners, reveals, ceiling junctions heads and sills etc, building regulations ask that this heatloss is measured and minimised.

As with every element/ component within the energy strategy of a building design, U-Values, air tightness, boiler efficiency etc, this 'Continuity' of insulation at the junctions has a numerical value within the SAP calculation tool – it's called the 'Y' value. From 2010 the Y-Value must now be actually calculated by the building designer, with a target of around 0.04 achieving the Fabric Energy Efficiency Standards for Future Homes Standard.

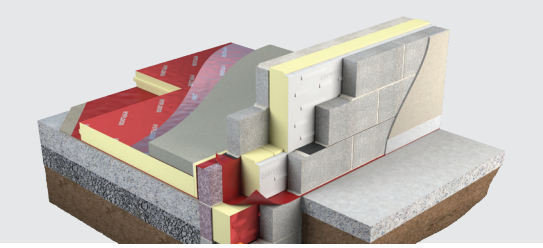
How the insulation system builds within a construction, how it interconnects at junctions and how it is witnessed and confirmed on site are of equal importance to U-Values. Better U-Values should not be used unless detailing is improved to match those levels.

INSTALLATION GUIDELINES

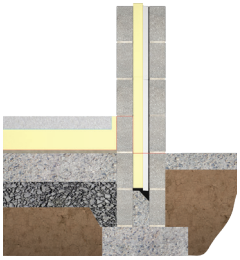
CT/PIR

Procedure: Internal and external build methods

1. CavityTherm can be built into cavity walls where either the outer or inner leaf is built first. Riser boards should be used below DPC level to ensure a min 150mm overlap with the floor insulation. The receiving block should be plumb to provide a flat surface to accept the insulation.



2. Where required Radon barriers or DPCs should be dressed over the cavity either dissecting the board or dressed behind the riser boards and across the cavity below the insulation. The insulation should be butted tightly either side of the barrier to provide thermal continuity. Pre-formed detailing of radon barriers provides a more accurate solution. Contact the membrane manufacturer for further guidance on installation and best practice.

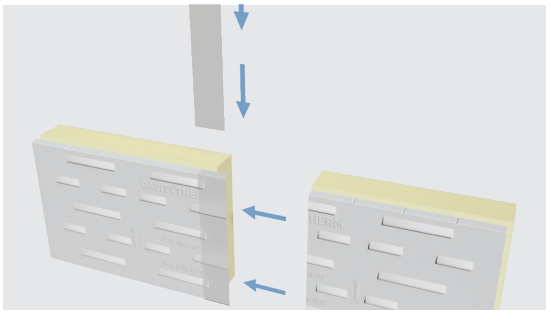


3. As with setting out, installation should commence from adjacent corners using the Unilin pre-formed corner boards. Alternate Corner Pieces will achieve the offset break bonded pattern for the insulation.

4. Install the first row of insulation boards, allowing for the floor insulation overlap, supported by at least 2 wall ties per board.Boards should be installed with the tongue upper most and the profiled face outer most, placed tightly against the inner face of the outer blockwork.
5. Wall ties conforming to BS EN 845-1:2013 should be used and placed at approx. 600mm centres, do not place directly on the DPC.
6. The type and spacing of wall ties are dependent on geographical area, cavity width, wall length and height and opening sizes. They should be placed at centres recommended by manufacturers to suit the wall specification and placed within the preformed notches of the CavityTherm.
7. In cavities up to 150mm, typically SS wire ties at 2.5/m^2 meet structural requirements, at these specifications the ties do not have a detrimental effect on the thermal performance (larger wall ties will reduce the thermal performance).
8. Slots should be cut into the exposed foam edge of the board to follow the sloped surface of the facing to allow the ties to run down towards the outer leaf.
9. Under PD 6697:2019 Recommendations for the design of masonry structures to BS EN 1996-1-1 and BS EN 1996-2 it is recommended that no more than four courses of block are laid on the preceding skin before installation of the insulation. This allows for wall ties to be inserted accurately and without bending and thus distorting the physical characteristics of the wall ties. Ensure the wall is level and free of any protrusions before installing the insulation with all edges tightly interlocked.
10. Mortar should be struck from the inner cavity face of the block to ensure mortar squeeze is minimised on the cavity side. The two courses of blockwork can then be built, ensuring the mortar is struck back from the cavity face to prevent mortar squeeze. The second skin of block should be built tight against the CavityTherm.
11. All boards should be tightly interlocked with vertical joints staggered. Continue the installation until a reveal is reached or boards abut mid wall. To form a butt join, remove the end profile from the abutting board(s) and fit tightly against the cut edge of the adjoining board.

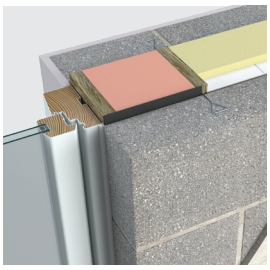
CT/PIR

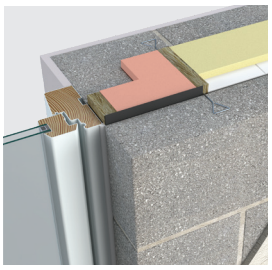
12. In the case of smaller sections of board being joined, when building from the outside, the junction can be taped with proprietary tape from Bostik or Venture Tapes. If building from the inside on smaller sections, tape can be applied and adjoined sections are lifted into the cavity. On larger sections, the Unilin jointing strip can be used, ensure the joint is well butted (see diagram).



13. This pattern should be repeated with subsequent lifts repeating the position of the first board. Alternate boards should be cut to different lengths to create a break bonded pattern if the corner boards have not been used.

14. It is recommended (to avoid piercing the boards with additional wall ties at reveal openings), that the Safe-R Close-R reveal panel is used to achieve a 4 hour fire rating and ensure wall ties are placed in the correct position ie. wall ties placed within 225mm of the opening on each board course. Alternatively, where a return block is used the Safe-R Close-R 75mm Return product accommodates wall ties to be placed within 225mm of the opening without the need to penetrate the CavityTherm board engineered facer.





15. In accordance with BS EN 845-1:2013 a vertical DPC should be provided that extends 25mm beyond the width of the closer.

16. Continue installation to total wall heightor if truncated, protect by an approved cavity tray, installed to manufacturer recommendations in accordance with BS EN 845-1:2013 CavityTherm should be separated from any flues with min 200mm of non-combustible material.

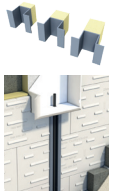
17. Where openings such as doors and windows are in close proximity, it is recommended that a continuous lintel or cavity tray is used. Damp-proofing at lintels, sills and penetrations must be provided with DPCs/Trays with stop ends and weep holes where required. Contact the cavity tray manufacturer for further guidance on installation and best practice.

18. Accredited Detailing must be followed and ensure that installation is in accordance with building regulations and accounted for in the SAP calculation.

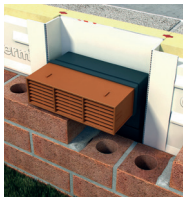
19. At service voids and penetrations, bespoke detail pieces are available to provide insulation continuity. (see diagrams below)

20. Contact the Unilin Technical team for further resources on installation best practice such as onsite 'Tool Box Talk' training, online animations and instructions.

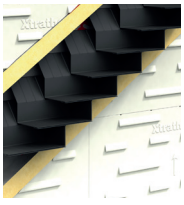
ACCESSORIES AVAILABLE



Hockey Stick Insulation



Service Void Panel



Insulated Cavity Tray Channel

FAQS

CT/PIR

What is CavityTherm?
CavityTherm wall insulation board is a high performance composite board of PIR core with a lambda value of 0.021 W/mK. The boards have gas tight facings with one face bonded to a profiled HIPS skin during manufacture to provide a drainage plane. CavityTherm's unique profiled facing directs any moisture that might have penetrated the external wall down the protective facing and back onto the external leaf. The board includes specifically designed rebated edge detailing on all four edges to allow the system to tightly interlock when installed.

What is the real benefit using CavityTherm?
Put simply, the U-Values achieved by placing CavityTherm into your standard 150mm cavity meet Passive House standards. It builds as a 'system to ensure continuity. You can physically see that the procedures on site are being followed. It's a very practical, affordable solution to low energy design.

What wall ties do I use with CavityTherm?
Standard S/S wire wall ties are used with CavityTherm. At up to 5 ties/m^2 the thermal impact is negligible because the cavity is kept to a reasonable width. Pushing the cavity wider and adding greater amounts of insulation will necessitate low conductivity ties, and result in worse Thermal Bridging at junctions. It is for this reason that a U-Value of around 0.15W/m^2K is seen as optimum by regulations and Passive House.

Why slope the wall ties down to the outer face?
This is not specific to CavityTherm, all wall ties in any construction should slope slightly down to prevent water travelling along the wall ties into the construction. Wall ties must be kept clean and free of mortar.

What thicknesses of CavityTherm are available?
CavityTherm is manufactured for 100mm, 110mm, 125mm and 150mm cavities, and achieves U-Values as low as 0.12 W/m^2K. Greater thicknesses may be available subject to quantity and lead time.

What building types can use CavityTherm?
Contact Unilin Insulation technical support for guidance suitability depending on building height.

CavityTherm has a lot of accessories as part of the 'system', what are they for?
An excellent wall U-Value is not the only item that must be addressed to achieve a Low Carbon Fabric. Airtightness and thermal bridging must also be improved. Thermal Bridging is in fact just 'good detailing' and is accounted for in SAP. Unilin is the only insulation board manufacturer that addresses gaps or breaks within the continuity of the insulation layer. How do you detail insulation around stepped cavity trays, periscope vents in suspended floors or at corners, or meter boxes? Unilin has developed bespoke insulated pieces to ensure that these details are well insulated so as to avoid thermal bridging and possible condensation mould growth.

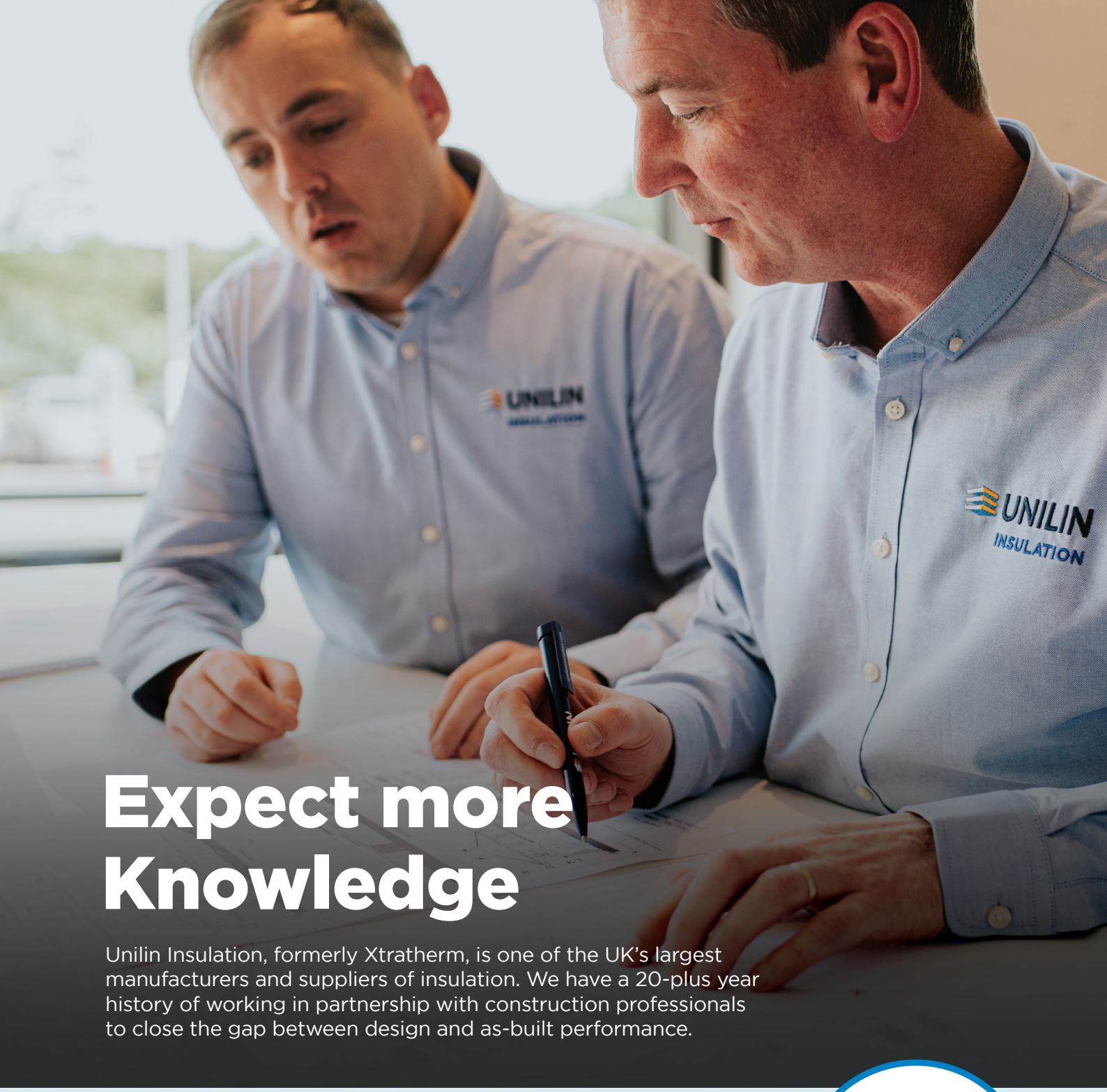
CavityTherm addresses thermal bridging, but how do I use this in my SAP calculation?
All the details available to download from the unilininsulation.co.uk have been based on the UK Accredited Details For Construction published by the DLUHC. These are standard details that have been accounted for in SAP for over many years. What Unilin has done is just replaced the conventional insulation included within them with CavityTherm. This has vastly improved the resultant thermal transmittance through all the specified junctions; corners, wall/floor, reveals etc, and will deliver a Y-Value for most dwellings below the 0.05 target asked for under Part L. Unilin has fully BRE qualified Thermal Bridging assessors with the added assurance that the technical team members you speak with are fully trained. U-Value and condensation risk analysis calculations are covered by the BBA/TIMSA competency scheme.

Is there a benefit in the 'Engineered edge detail'?
The Building Regulations now ask that insulation systems be 'continuous' and are installed in accordance with acceptable detailing. The jointing system in Unilin products achieves this, encourages a more accurate build, and avoids the 0.01 U-Value penalty that should be applied when calculating to BR443.

When a board is cut what tape do I use to make the join?
When two abutting boards are to join, cut the profiled edge from each board and ensure that they are closely butted. The joint should be sealed. When building the inner leaf first - seal with a waterproof tape. The tape should be applied to a dry surface. When building from the inside a preparatory self adhesive jointing strip is available to insert over the join. Any penetrations or small repairs can be made with the tape or sealant. Any services running through the insulation layer should be sloped to the outside. DPCs should be dressed over services Contact the membrane manufacturer for further guidance on installation and best practice.

You recommend the use of a 'Cavity Board' – what is that?
The use of a cavity board is recommended during construction. It is a board that is placed over the installed boards as the inner leaf is raised to catch any mortar drops that might fall. If mortar does fall onto the upper edge of the CavityTherm the HIPS skin is easily cleaned with a damp cloth.

Where do I get further information?
Full details relating to compliance with Building Regulations, independently verified technical specification, assessment criteria and technical investigations, design considerations and installation guidance are available on www.unilininsulation.co.uk



Expect more Knowledge

Unilin Insulation, formerly Xtratherm, is one of the UK's largest manufacturers and suppliers of insulation. We have a 20-plus year history of working in partnership with construction professionals to close the gap between design and as-built performance.

FREE
One-to-one advice

Higher standards of fabric performance call for greater adherence to best practice detailing. To achieve this and to 'close the gap' between design and build, we provide a dedicated Technical Team, all qualified to the highest standards of competency in U-Value calculation and condensation risk analysis.

Here to support you

- BRE listed Thermal Bridging Detailing
- BRE Trained Modelling
- BBA/TIMSA calculation competent
- Warranted Calculations available
- Immediate technical response
- SAP Qualified
- Insulation systems to deliver real onsite performance

Get in touch

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Agrément Certificate 10/4786

ISO 45001 Occupational Health & Safety Management Systems
ISO 9001 Quality Management Systems
ISO 14001 Environmental Management Systems

The Sustainable Solution

Specifying Unilin Insulation is a real commitment to minimising energy consumption, harmful CO_2 emissions and their impact on the environment. Using our products is one of the most effective ways to reduce energy consumption – in fact, after just eight months the energy they save far outweighs the energy used in their production. In addition, our manufacturing facilities operate to an ISO 14001 certified Environmental Management System.

Environmental Product Declaration (EPD)

An Environmental Product Declaration or EPD for a construction product indicates a transparent, robust and credible step in the pursuit and achievement of real sustainability in practice, it is a public declaration of the environmental impacts associated with specified life cycle stages of that product. Unilin EPDs have been independently verified in accordance with EN 15804+A2:2019 and ISO 14025 accounting for stages of the LCA from A1 to A3, with options A4-A5 and modules C1-C4 and D included. The process of creating and EPD allows us to improve performance and reduce resource wastage through improvements in product design and manufacturing efficiency. They play a crucial role in manufacturing and construction and are increasingly asked for by industry.

EPDs and BREEAM

BREEAM is primarily trying to encourage designers to take EPDs into consideration when specifying products. BREEAM requires EPDs to be verified by a third-party. For the Mat 02 category, points are awarded based on whether EPDs are generic, manufacturer-specific, or product-specific. Non 3rd party verified EPDs to EN 15804 cannot be accepted. All of Unilin EPDs are externally verified.

Responsible Sourcing

Unilin has BES 6001 certification for responsible sourcing. The second BREEAM credit under that category is based on responsibly-sourced materials – at least 80% of the total insulation used in roofs, walls, ground floors and services must meet any of tier levels 1 to 6 in the BREEAM table of certification schemes. Our Environmental Management System is certified under EN ISO 14001, and our raw materials come from companies with similarly certified EMS (copies of all certificates are available for BREEAM assessments). This level of responsible sourcing meets tier level 6 in the BREEAM table.

Good workmanship and appropriate site procedures are necessary to achieve expected thermal and airtightness performance. Installation should be undertaken by professional tradespersons. The example calculations are indicative only, for specific U-Value calculations contact Unilin Insulation Technical Support. Unilin technical literature, Agrément certifications and Declarations of Performance are available for download on the Unilin Insulation website. The information contained in this publication is, to the best of our knowledge, true and accurate at the time of publication but any recommendations or suggestions which may be made are without guarantee since the conditions of use are beyond our control. Updated resources may be available on our websites. All images and content within this publication remain the property of Unilin Insulation.

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