

THIN-R PIR INSULATION

Drylining Walls Fixed with Adhesive Dabs

XT/TL



Insulation & drylining
in one application

Provides vapour
control layer

Reduced insulation thickness

Suitable for a
variety of wall types

Solution in refurbishment
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Thin-R Thermal Liner (Dot & Dab) is a composite insulated panel of Unilin PIR insulation core with a composite kraft facing bonded to 12.5mm tapered edge plasterboard for internal applications, fixed with proprietary adhesive bonding.


The composite kraft facing on both sides incorporates an integral vapour control layer, which helps to reduce the risk of condensation. Thin-R Thermal Liners are designed to provide high levels of thermal insulation and drylining in one operation, providing the solution of choice in new build and renovation. Whether building new or upgrading, due consideration towards the energy efficiency of your home can have many benefits, including reduced energy costs and improved living conditions.

Benefits

- Insulation & drylining in one application
- Provides effective vapour control layer
- Reduced insulation thickness
- Suitable for a variety of wall types
- Solution in refurbishment and new build

Specification Clause

The insulated dry lining wall insulation shall be Thin-R XT/TL manufactured to EN 13950:2014 by Unilin Insulation, comprising of a rigid Polyisocyanurate (PIR) core with kraft paper facings. The Thin-R XT/TL ___mm with an Agrément declared Lambda value of 0.022 W/mK (PIR only) bonded to 12.5mm plasterboard, achieving a U-Value of ___W/m²K for the wall element. The insulated drylining plasterboard XT/TL shall be fixed with plaster dabs adhesive or proprietary system in accordance with instructions issued by Unilin Insulation.

An Environmental Product Declaration (EPD), certified by  IGBC IRISH GREEN BUILDING COUNCIL is available for the product insulation. Please contact technical support for further details.

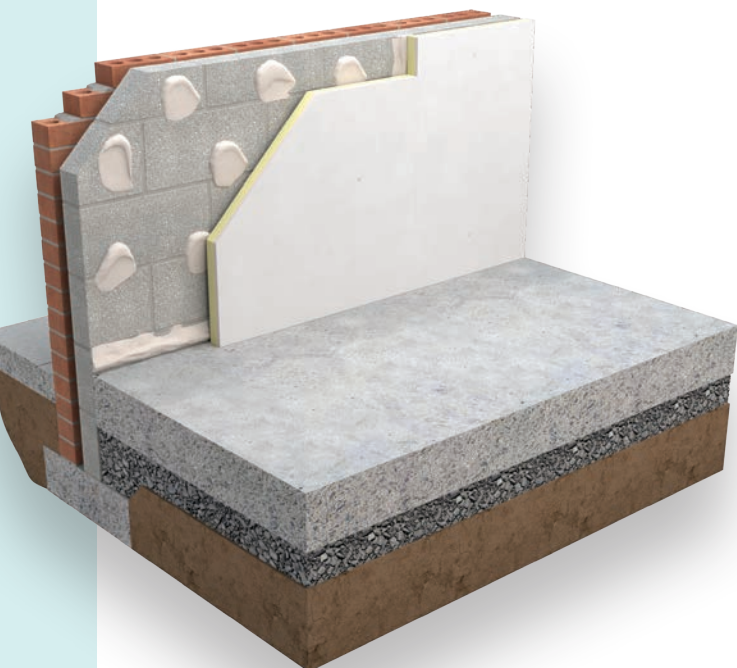
Refer to NBS clause K10 205, K10 15, K10 245, K10 35, K10 155, K45 45. Uniclass 25 71 63 66.

**Thermal Resistances**

Thickness PIR (mm)	Thickness Plasterboard (mm)	Overall Thickness (mm)	R-Value (m ² K/W)
25	12.5	37.5	1.20
38	12.5	50.5	1.75
50	12.5	62.5	2.30
60	12.5	72.5	2.75

Resistance 'R' Values

The resistance value of any thickness of material can be ascertained by dividing the thickness (in metres) by its Lambda value, for example: Lambda 0.022 W/mK and PIR thickness 50mm -> 0.050/ 0.022 -> R-Value = 2.27. This is then added to the 12.5mm plasterboard resistance (0.066) to calculate the overall resistance of the composite board (2.27 + 0.066) = 2.336. In accordance with EN 13950:2014, R-Values should be rounded down to the nearest 0.05 (m²K/W).





WALLS

XT/TL

1. Integral vapour control layer

The composite kraft facing on this board provides a gas and vapour tight barrier, reducing the condensation risk. A continuous vapour control layer is created when the boards' joints are sealed and taped in accordance with good drylining practice.



Fire Stops

An important factor when drylining a wall is to provide fire stops along the top and bottom of each board and around all openings (doors, windows, etc.). These are provided by the continuous ribbons of adhesive and prevent fire penetrating behind the insulation layer. These continuous ribbons of adhesive also help to prevent thermal looping, leading to an overall improved U-Value for the wall element.

XT/TL

Length (mm)	2400
Width (mm)	1200
Thickness including plasterboard (mm)	37.5, 50.5, 62.5, 72.5, 82.5, 92.5

Other thicknesses may be available depending on minimum order quantity and lead time.

Property & Units

Thermal Conductivity	0.022 (W/mK) (PIR only)
Reaction to Fire	Euroclass B s1 d0

Unilin Declaration of Performance (DoP) for this product is available for download from our website.

INSTALLATION GUIDELINES

XT/TL

1. Ensure the wall is dry and free from any protrusions/wallpaper etc.
2. Mark the position of the Thermal Liner on the wall. Setting out and planning board positioning is essential.
3. Apply adhesive dabs to the wall in accordance with BS 8000-8:2023, ensuring a 50mm continuous ribbon of adhesive is created at the top and bottom of each board and around all openings. Follow adhesive manufacturer's guidelines. General recommendation is to apply vertical dabs at 300mm centres, 25mm in from the edge. Dabs should be 50-75mm wide and approximately 25mm deep to allow for tamping. Total contact with board area should be minimum 20%. Maximum height installation for this system is 3m.



4. Lift the Thermal Liner into position using wedges on the floor.
5. Align the board squarely on wall. Apply pressure to the board to level and embed it into the adhesive. Allow a 15mm clearance gap at the base of the wall which should be filled with a foam filler or equivalent. Insulation should be cut back to accommodate an adjoining panel at external corners. Joints should be tightly butted.
6. When the adhesive has dried, 3 mechanical fixings (thermally broken) should be fixed through the centre of the board.



7. Seal and tape the joints of the plasterboard to ensure a continuous vapour control layer is created.
8. Plaster skim to finish.

Note

When upgrading existing properties, a professional should be engaged to assess the property for appropriate insulation treatments and effective detailing. Walls should be dry and decoration stripped back to the wall substrate. Appropriate ventilation strategies must be considered as part of the overall energy upgrade.

Guidance in PAS2030:2023 'Specification for the installation of energy efficiency measures (EEM) in existing buildings' and BS 8000-8:2023 - Workmanship on construction sites - Design and installation of dry lining systems. Code of practice should be consulted.

THERMAL PERFORMANCE

XT/TL

Typical U-Values



Table 1

U-Value calculations to EN ISO:6946 2017
XT/TL
Dot & Dab

Thickness (mm)

	37.5mm	50.5mm	62.5mm	72.5mm	82.5mm	92.5mm
215mm Hollow Block (External Render)	0.58	0.43	0.35	0.30	0.27	0.24
300mm Clear Cavity Wall Block & Block	0.54	0.41	0.33	0.29	0.26	0.23
Solid Brick	0.56	0.42	0.34	0.30	0.26	0.23
Cavity Wall Pumped Block & Block*	0.22	0.19	0.18	0.16	0.15	0.14

*100mm Pumped Bead @ 0.033 W/mK

HANDLING, CUTTING & STORAGE

Unilin insulation should be stored off the ground, on a clean, flat surface and must be stored under cover. The polythene wrapping is not considered adequate protection for outside exposure. Care should be taken to protect the insulation in storage and during the build process.

The insulation boards can be readily cut using a sharp knife or fine toothed saw. Ensure tight fitting of the insulation boards to achieve continuity of insulation as asked for within the ACDs. Appropriate PPE should be worn when handling insulation. Please refer to Health & Safety data sheets on our website.

The boards are wrapped in polythene and each pallet is labelled with details of grade/type, size and number of pieces per pallet.

Durability

Unilin Insulation products are stable, rot proof, provide no food value to vermin and will remain effective for the lifetime of the building, depending on specification and installation. Care should be taken to avoid contact with acids, petrol, alkalis and mineral oil. When contact is made, clean materials in a safe manner before installation.





Expect more Knowledge

Unilin Insulation 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.

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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ISO 45001:2023+A1:2024 Occupational Health & Safety Management Systems

ISO 9001:2015+A1:2024 Quality Management Systems

ISO 14001:2015+A1:2024 Environmental Management Systems

The Sustainable Solution

Specifying Unilin Insulation is a real commitment to minimising energy consumption, harmful CO₂ 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 14001:2015+A1:2024 certified Environmental Management System.

Environmental Product Declaration (EPD)

An Environmental Product Declaration or EPD for a construction product indicates a transparent 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 14025:2010 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 an 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 O2 category, points are awarded based on whether EPDs are generic, manufacturer-specific, or product-specific. Non 3rd party verified EPDs to EN 15804:2012+A2:2019 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 14001:2015+A1:2024, 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.