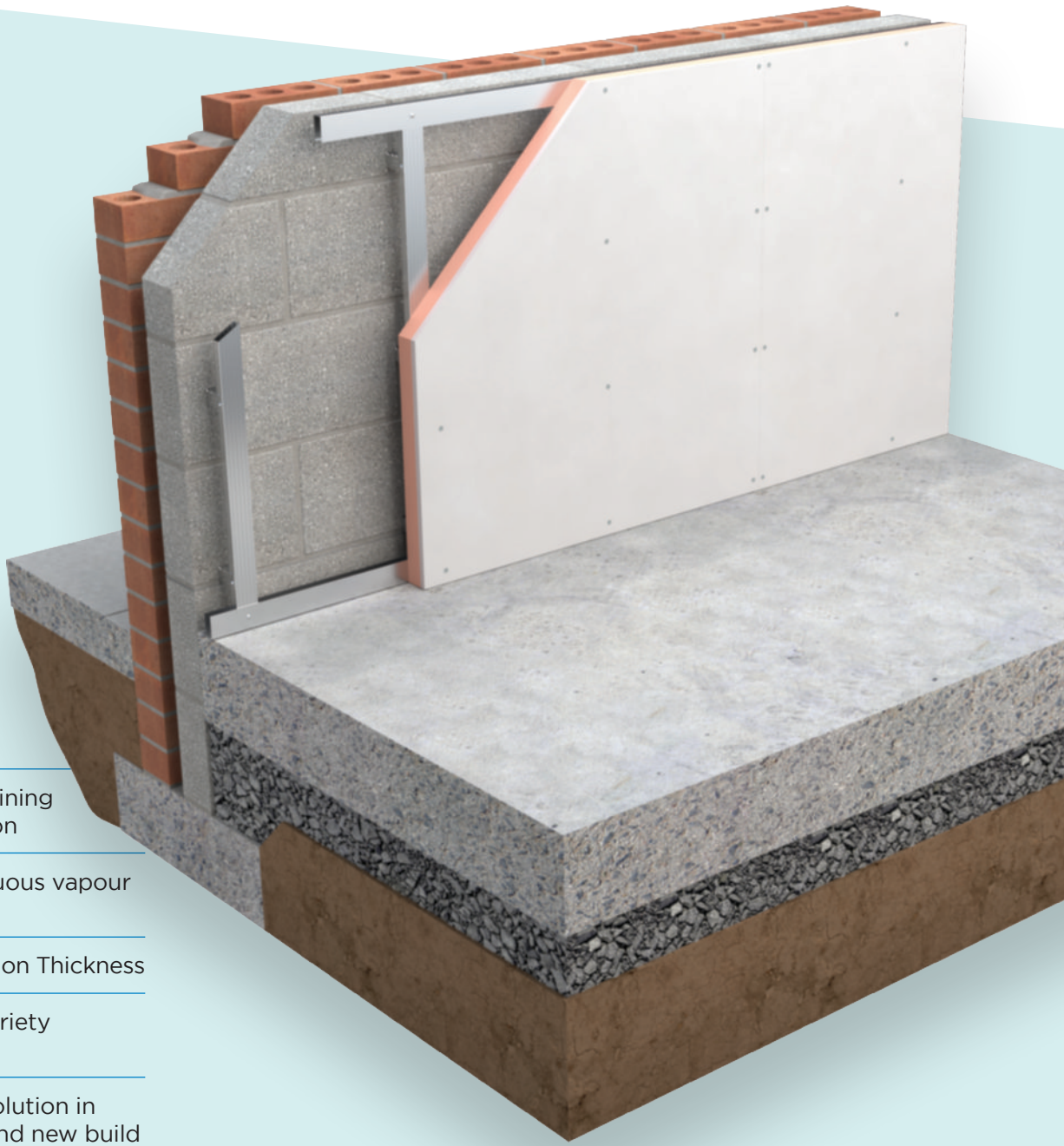
SAFE-R PHENOLIC INSULATION

Drylining Walls - Mechanically Fixed

SR/TB-MF



- Insulation & drylining in one application
- Provides continuous vapour control layer
- Reduced Insulation Thickness
- Suitable for a variety of wall types
- Cost effective solution in refurbishment and new build

UNILIN INSULATION

Suitable for a variety of wall types

SAFE-R PHENOLIC INSULATION
Drylining Walls - Mechanically Fixed

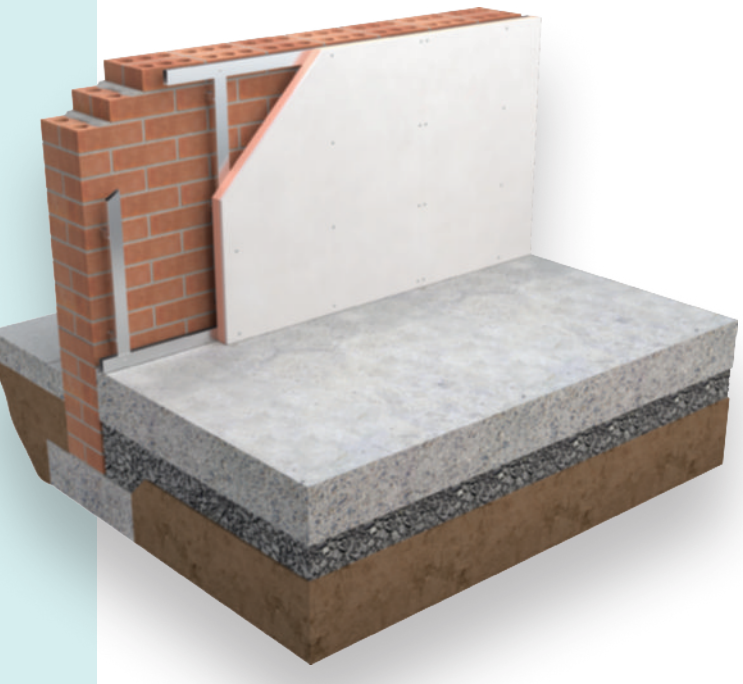
SR/TB-MF

SR/TB-MF is a composite insulated panel of phenolic insulation core with a composite foil facing bonded to 12.5mm tapered edge plasterboard for internal walls, sloped roofs and ceilings. SR/TB-MF is only suitable for mechanically fixed applications.

The composite foil facing on both sides of SR/TB-MF incorporates an integral vapour control layer, which helps to reduce the risk of condensation. SR/TB-MF is designed to provide high levels of thermal insulation and drylining in one operation, providing the solution of choice in new build and renovation.

Benefits

- Insulation & drylining in one application
- Provides continuous vapour control layer
- Reduced Insulation Thickness
- Suitable for a variety of wall types
- Cost effective solution in refurbishment and new build



Specification Clause

The insulated drylining wall insulation shall be Safe-R SR/TB-MF manufactured to EN 13166 by Unilin Insulation, comprising a rigid Phenolic core between composite foil/glass tissue facings. The SR/TB-MF_ _ _mm with Lambda value as low as 0.020 W/mK (Phenolic only), bonded to 12.5mm plasterboard to EN 13950, achieving a U value of _ _ _W/m²K for the wall element. The insulated drylining plasterboard SR/TB-MF shall be mechanically fixed to battens, or proprietary system in accordance with instructions issued by Unilin Insulation.

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

Refer to NBS clause K10 205, K10 15, K10 245, K10 25

Thermal Resistances

Thickness Phenolic (mm)	Thickness Plasterboard (mm)	Overall Thickness (mm)	Overall R-Value (m²K/W)
25	12.5	37.5	1.15
38	12.5	50.5	1.70
50	12.5	62.5	2.40
60	12.5	72.5	2.90

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 0.021 W/mK and Phenolic thickness 50mm -> 0.050/ 0.021 -> R-Value = 2.380. This is then added to the 12.5mm plasterboard resistance (0.066) to calculate the overall resistance of the composite board (2.380 +0.066) = 2.446. In accordance with EN 13950, R-Values should be rounded down to the nearest 0.05 (m²K/W).

SR/TB-MF

1. Vapour control layer

Seal and tape the joints of Safe-R SR/FB MF Thermal Laminate to ensure a continuous vapour control layer is created. Fill any gaps with foam filler or equivalent.

2. 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 battens and prevent fire penetrating behind the insulation layer. This also helps to prevent thermal looping, leading to an overall improved U-Value for the wall element.

3. Service Void

The void created between the battens can be used for accommodating services.

SR/TB-MF

Length (mm)	2400 (UK)
Width (mm)	1200
Thickness (mm)	37.5, 52.5, 62.5, 72.5, 82.5

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

Property & Units

Thermal Conductivity	0.020 - 0.023 (W/mK)
Reaction to Fire	Euroclass B-s1, d0

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

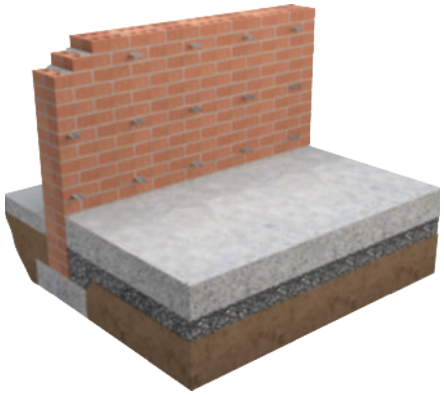
Note: Improved Overall U-value

Thanks to its low emissivity foil facings SR TB-MF, facing into an unventilated air void between battens, will improve the U-Value of the wall.

INSTALLATION GUIDELINES

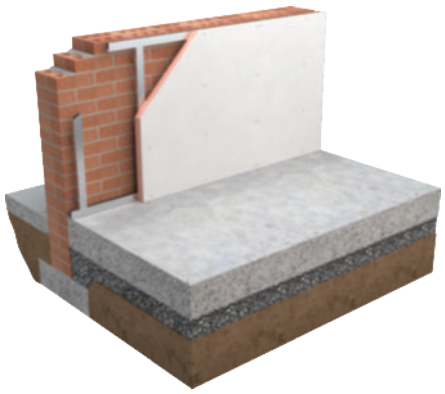
SR/TB-MF

1. Ensure the wall is dry, clean and free of protrusions. Any existing wallpaper should be removed.
2. Fix the metal frame system/vertical timber battens to the wall in accordance with the manufacturer s instructions. Sections should be placed around all wall edges and around openings and services.



3. Fix the metal frame system/vertical timber battens at a maximum of 600mm centres (incorporating a vertical DPC behind timber battens). Ensure framing system/battens are wide enough to offer 20mm support to all four edges of the plasterboard. Pack battens if necessary to level the wall. Extra noggins may be required when the SR/TB-MF is unsupported by the battens.

4. Lift the SR/TB-MF into position using wedges on the floor. Insulation should be cut back to accommodate an adjoining panel at external corners. Joints should be tightly butted.



5. Fix SR/TB-MF to the frame at 300mm centres using appropriate fixings eg. drywall screws, at least 12mm in from the board edge. The fixings should penetrate at least 25mm into the timber batten. Fixings should be thermally broken where possible.
6. Seal and tape the joints of SR/TB-MF to ensure a continuous vapour control layer is created. Fill any gaps with foam filler.

7. Plaster skim to finish.

Note on other variations

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 PAS2030:2019 'Specification for the installation of energy efficiency measures (EEM) in existing buildings'and BS8212 Code of practice for dry lining and partitions should be consulted.

ACDs must be followed to ensure that installation is in accordance with current Building Regulations and accounted for in the energy calculation.

THERMAL PERFORMANCE

SR/TB-MF

Typical U-Values

CERTIFICATE CS/nnnn-n
U Value Competency Scheme

Table 1
U-Value calculations to EN ISO:6946
SR/TB-MF Insulation for Drylining Walls – Mechanically Fixed

Thickness (mm)

Wall Type	62.5mm	72.5mm	87.5mm	92.5mm	112.5mm
215mm Hollow Block (External Render)	0.30	0.26	0.22	0.21	0.17
300mm Clear Cavity Wall Brick/Block	0.28	0.25	0.21	0.20	0.16
Solid Brick	0.29	0.26	0.22	0.21	0.17
Cavity Wall Pumped Block & Block*	0.16	0.15	0.14	0.13	0.12

*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 packs and each pack is labelled with details of grade/type, size and number of pieces per pack.

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

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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.