

# Safe-R

## Superior Performance Phenolic Insulation

### Walls

#### SR/TB-MF

Insulation for  
Drylining Walls –  
Mechanically Fixed



**Xtratherm**<sup>®</sup>  
More than insulation



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Superior Performance  
Phenolic Insulation

# SR/TB-MF

Insulation for  
Drylining Walls - Mechanically Fixed

**SR/TB-MF is a composite insulated panel of Xtratherm 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 newbuild and renovation.



## Specification Clause

The insulated drylining wall insulation shall be Xtratherm Safe-R SR/TB-MF manufactured to EN 13950 by Xtratherm, comprising a rigid Phenolic core between composite foil facings. The SR/TB-MF \_\_\_mm with Lambda value of 0.020 - 0.023 W/mK (Phenolic only), bonded to 12.5mm plasterboard, to achieve a U-Value of \_\_\_W/m<sup>2</sup>K 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 Xtratherm.

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



## Thermal Resistances

Thickness (mm) Phenolic	Thickness (mm) Plasterboard	Overall Thickness (mm)	R-Value (m <sup>2</sup> K/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 (m<sup>2</sup>K/W).

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



**1**

#### Integral vapour control layer

The composite foil facings on SR/TB-MF provides a gas and vapour tight barrier, reducing the condensation risk. A continuous vapour control layer is created when the SR/TB-MF joints are sealed and taped in accordance with drylining good practice.

**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.

#### 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.



#### SR/TB-MF

<b>Length (mm)</b>	2400 (UK) 2438 (ROI)
<b>Width (mm)</b>	1200
<b>Thickness (mm)</b>	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

<b>Thermal Conductivity</b>	0.020 to 0.023 (W/mK) (Phenolic only)
<b>Reaction to Fire</b>	Euroclass B s1 d0

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

# Installation Guidelines

1. Ensure the wall is dry, clean and free of protrusions. Any existing wallpaper should be removed.
2. Fix metal frame system 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 PAS2030:2017 '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.

## Handling, Cutting and Storage

Xtratherm 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 datasheets 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.

# Xtratherm®



## Durability

Xtratherm products are stable, rot proof and will remain effective for the life span of the building, dependent 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.



## Typical U-Values

**Table 1**

U-Value calculations to EN ISO:6946

**SR/TB-MF** Insulation for Drylining Walls – Mechanically Fixed



Wall Type	Thickness (mm)				
	50	60	70	80	90
<b>300mm Clear Cavity Wall Brick/Block</b>	0.28	0.25	0.22	0.20	0.18
<b>215mm Hollow Block (External Render)</b>	0.29	0.26	0.23	0.21	0.19
<b>Cavity Wall Pumped Block &amp; Block*</b>	0.16	0.14	0.14	0.13	0.12

Pumped Bead @ 0.033 W/mK\*

# Expect More **KNOWLEDGE**

At Xtratherm we understand the importance of giving our customers the best technical advice.

We have taken the unique industry step of training every one of our technical team that deals directly with our customers, to the highest industry standards of competency in U-Value calculation and condensation risk analysis. We have Thermal Bridging covered also under the BRE/NSAI Thermal modelling competency scheme, using the most comprehensive 3D software available.

**Our team and products are certified in the UK and Ireland and through the following certifications bodies:**

- BRE Thermal bridging modelling competency certification
- NSAI Thermal modelling competency scheme
- TIMSA-BBA competency scheme for U-Value calculation and condensation risk analysis
- BBA and NSAI certification of the Xtratherm insulation boards
- SAP and DEAP energy assessment

**Our technical team can also provide:**

- Thermal calculations
- Technical advice on building regulations in the UK and Ireland
- Technical papers on a variety of topics
- Certified CPDs
- BIM modelling
- NBS Specifications
- Educational resources for technical secondary and tertiary colleges

**Please refer to the Resources section of our website for more details**



The **Xtratherm** Innovation Centre

The Xtratherm exhibition space and training academy has been developed to assist construction professionals in understanding the principles of specifying and achieving on-site, best practice insulation standards for new dwellings, commercial envelope solutions and refurbishment projects.



**Get in touch**

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# Xtratherm®

More than insulation

## The Sustainable Solution

Specifying Xtratherm is a real commitment to minimising energy consumption, harmful CO<sup>2</sup> 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.

## The BRE Green Guide

The 2008 Green Guide to Specification produced by the BRE gives Xtratherm Insulation products a rating of A or A+. Green Guide ratings are used to gain credits in BREEAM (BRE Environmental Assessment Method) for non-residential buildings, and under 'Mat 4 – Insulation' the first credit requires the building to have an Insulation Index of 2 or greater – only achievable if the weighted average rating of the insulation is A or A+. This shows that all our products have been made with materials that have been responsibly sourced. The standard sets out organisational governance, supply chain management and environmental and social aspects that are verified and ensure responsible sourcing of materials.

## Responsible Sourcing

Xtratherm 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.

## Global Warming and Ozone Depletion

All Xtratherm Insulation products use CFC- and HCFC-free materials, and are manufactured using a blowing agent with a low GWP and zero ODP.

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 Xtratherm Technical Support. Xtratherm technical literature, Agrément certifications and Declarations of Performance are available for download on the Xtratherm websites. 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 Xtratherm.

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ISO 9001 | Quality Management Systems

ISO 14001 | Environmental Management Systems



Assessed to ISO 9001  
Cert/LPCB ref. BS12485



Assessed to ISO 14001  
Cert/LPCB ref. BS12485

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