Thin-R

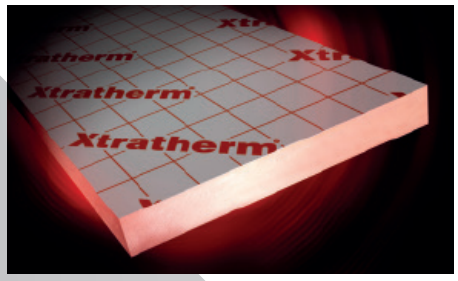
PIR
Insulation

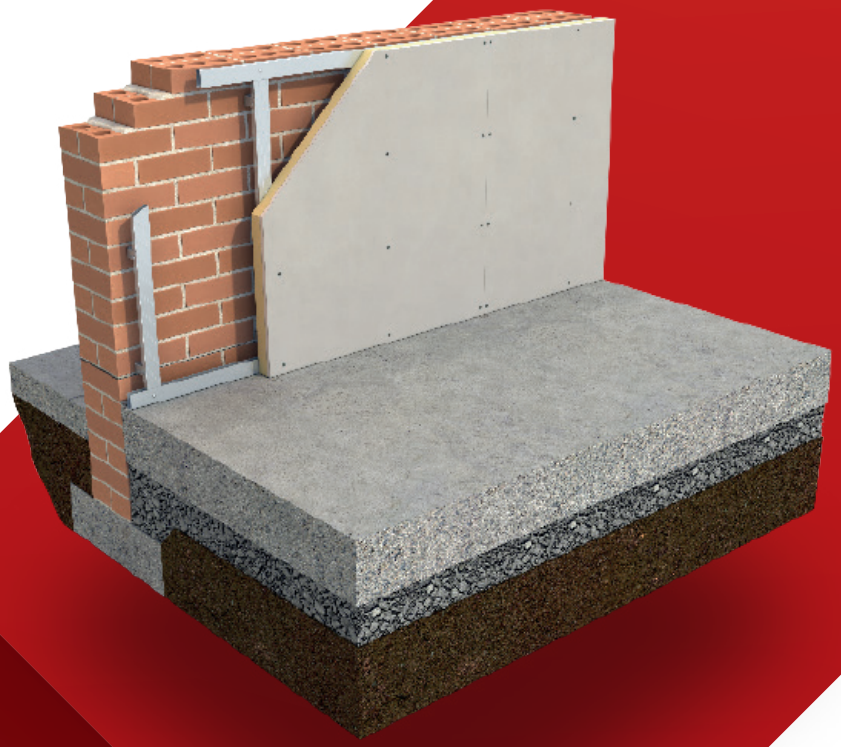
Walls

XT/TL-MF

Insulation for
Drylining Walls (Mechanically Fixed)







Xtratherm®
More than insulation

BBA APPROVAL INSPECTION TESTING CERTIFICATION
04/4130

NSAI
03/0183

Data Sheet

Thin-R PIR Insulation

XT/TL-MF

Insulation for Drylining Walls – Mechanically Fixed

Thin-R Thermal Liner Mechanically Fixed XT/TL-MF is a composite insulated panel of Xtratherm PIR insulation core with a composite foil facing bonded to 12.5mm tapered edge plasterboard for internal walls, sloped roofs and ceilings. XT/TL-MF is only suitable for mechanically fixed applications.

The composite foil facing on both sides of XT/TL-MF incorporates an integral vapour control layer, which helps to reduce the risk of condensation. XT/TL-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 Thin-R XT/TL-MF manufactured to EN 13950 by Xtratherm, comprising a rigid Polyisocyanurate (PIR) core between composite foil facings.The XT/TL-MF_ _ _mm with Agrément certified Lambda value of 0.022 W/mK (PIR only), bonded to 12.5mm plasterboard, to achieve a U-Value of_ _ _ W/m^{2}K for the wall element. The insulated drylining plasterboard XT/TL-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

NBS Plus

Thermal Resistances

Thickness (mm) PIR	Thickness (mm) Plasterboard	Overall Thickness (mm)	R-Value (m^{2}K/W)
25	12.5	37.5	1.10
40	12.5	52.5	1.80
50	12.5	62.5	2.25
60	12.5	72.5	2.70

Resistance 'R' Values

The resistance value of any thickness of Xtratherm insulation can be ascertained by simply dividing the thickness of the material (in metres) by its agrément declared lambda value, for example: Lambda 0.022 W/mk and thickness 50mm -> 0.050/ 0.022 -> R-Value = 2.25. In accordance with EN 13950, R-values should be rounded down to the nearest 0.05 (m^{2}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 facing on XT/TL-MF provides a gas and vapour tight barrier, reducing the condensation risk. A continuous vapour control layer is created when the XT/TL-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 timber battens can be used for accommodating services.

Note:
Improved Overall U-Value

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

XT/TL-MF	
Length (mm)	2400 (UK) 2438 (ROI)
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	0.022 (W/mK) (PIR only)
Reaction to Fire	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/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 XT/TL-MF is unsupported by the battens.



4. Lift the XT/TL-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 XT/TL-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 XT/TL-MF to ensure a continuous vapour control layer is created. Fill any gaps with foam filler.

7. 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 PAS2030:2017 '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.

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

Handling, Cutting and Storage

Xtratherm

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 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

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.



Thermal Performance

Typical U-Values

Table 1

U-Value calculations to EN ISO:6946

XT/TL-MF Drylined

Thickness (mm)

Wall Type	50	60	70	80	90
300mm Clear Cavity Wall Brick/Block	0.29	0.26	0.23	0.21	0.19
215mm Hollow Block (External Render)	0.30	0.27	0.24	0.21	0.20
Cavity Wall Pumped Block & Block*	0.16	0.15	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

Xi
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

Dedicated Technical Team:
UK: +44 (0) 371 222 1055
ROI: +353 (0) 46 906 6050

Thermal Calculations, Technical Advice or to arrange a technical visit:
info@xtratherm.com

Xtratherm®
More than insulation

The Sustainable Solution

Specifying Xtratherm 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.

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 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 Xtratherm.

Xtratherm UK Limited
Park Road Holmewood
Chesterfield, Derbyshire
United Kingdom
S42 5UY

T + 44 (0) 371 222 1033
F + 44 (0) 371 222 1044

info@xtratherm.com

xtratherm.com

Xtratherm Limited
Liscarton Industrial Estate
Kells Road, Navan
Co. Meath, Ireland
C15 NP79

T +353 (0)46 906 6000
F +353 (0)46 906 6090

info@xtratherm.ie

xtratherm.ie

ISO 9001 | Quality Management Systems

ISO 14001 | Environmental Management Systems

Xtratherm, part of UNILIN group.

UIBXTTLMFA4-1