# A TECHNICAL GUIDE TO INSULATING WITH MULTIBOARD

**Multiboard** high performance insulation board
helping to make Britain's homes more energy efficient!


BBA APPROVAL INSPECTION TESTING CERTIFICATION
CERTIFICATE 05/4687

CE
EN 13164

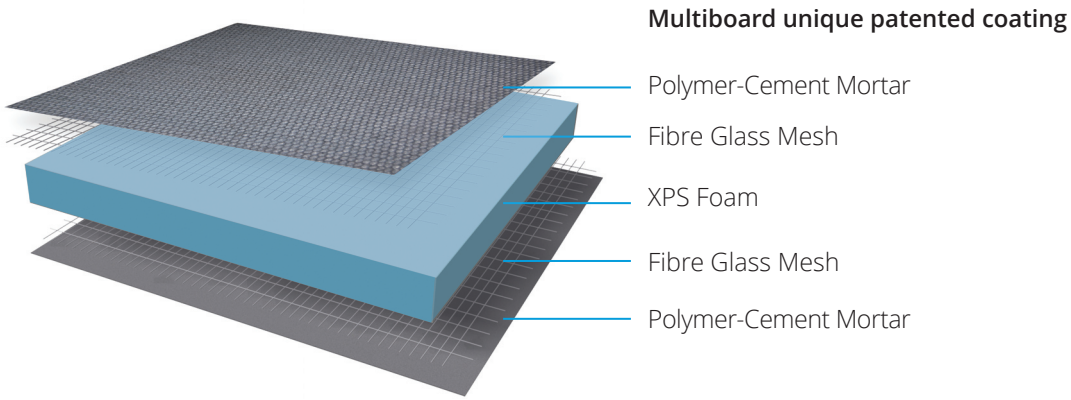
marmox multiboard
Waterproofing • Insulating • Drylining

marmox multiboard
Waterproofing • Insulating • Drylining

# Multiboard Technical Characteristics

## What is Marmox® Multiboard made of ?

Marmox Multiboard consists of a core of extruded polystyrene bonded between layers of fibreglass reinforced polymer concrete. This layer provides the perfect level of porosity to bond with tile adhesive or plaster. The extruded polystyrene layer provides insulation and makes the board completely impermeable to water. The combination of the rigid outer shell and the XPS core which absorbs lateral movement makes the board an effective decoupling layer.




| Marmox Multiboard - TECHNICAL DATA | | |
|---|---|---|
| **Compressive Strength (at 10% deformation)** | (EN 826) | 400kPa (40 tonnes/$m^2$) |
| **Thermal Conductivity** | (EN 13164) | 0.034 Watts/mK |
| **Water Absorption of XPS** | (EN 12087) | <0.7% |
| **Coefficient of Thermal Expansion** | (ASTM D696) | $8x10^{-6}$ $k^{-1}$ |
| **Flammability** | (EN 476-6,7)<br>(EN 13501) | Class 0<br>Class E |
| **ODP** | | zero |
| **GWP** | | 0.29 |
| **Maximum Tile Loading Weight** | CMB 02/16 | To the limit of the tile adhesive (typically 100kg/$m^2$) |
| **Declaration of Performance (CE)** | XPS-EN13164-T1-CS(10\Y)400-CC(2/1/10)115-WL(T)3 | |

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CE EN 13164

marmox LIFETIME GUARANTEE FOR TOTAL PEACE OF MIND

Marmox Multiboard is BBA Certified and CE marked as an insulation board and comes with a lifetime guarantee

# Internal Wall and Floor Insulation

Marmox Multiboard is strong, waterproof and lightweight insulation board that can be used on walls, floors and ceilings. It is CE Marked as an insulation material.

Marmox Multiboards (10mm and thicker) are CE-marked rigid insulation boards with thermal conductivities between 0.033 to 0.036W/mK. The use of Marmox Multiboards as internal wall insulation panels will significantly improve that wall's U value and reduce the risks of surface condensation and mould growth.

Marmox Multiboards are significantly lighter than most alternative boards (for example, 1sq.m of 12.5mm thick Marmox Multiboard weighs 3.7kg whereas a typical plasterboard is 8.7kg). Coupled with their relatively small size, their low weight makes them easy to fit.

Marmox Multiboards are stable and immune to dimensional variations due to changes in temperature and humidity.

## Applications

In addition to the applications below, Marmox Multiboards can be used to insulate door and window reveals, to create partition walling and as an insulation board on ceilings. Thinner boards such as 6mm are often used in reveals which although not providing as efficient insulation as thicker board will reduce heat loss and typically eliminate the risk of surface condensation and possible subsequent mould growth.

### Walls

- Insulation board on internal masonry wall
- Insulation board (10 and 12.5mm) on internal stud wall
- Insulation board (20mm and thicker) on internal stud wall

### Floors

- On a concrete floor
- On a plywood sheet flooring
- On a OSB or Chipboard sheet flooring
- On a traditional floorboards
- On raised access flooring
- In conjunction with underfloor heating

**Multiboard** For lining walls

Multiboard can be used to insulate and waterproof walls, floors and ceilings, replacing plasterboard or laminated thermal plasterboard.

**Multiboard** For lining floors

Multiboard will significantly reduce heat loss through the floor and is recommended by underfloor heating manufacturers. Fully waterproof, Multiboard is the ideal base to tile on.

# Building Regulations

## Building Regulations

One aspect of building regulations is to improve the thermal efficiency of buildings. They must be met when applied to any project above a certain size. In England and Wales this requirement is in **Approved Document L1, or ADL1** (for domestic buildings) and **ADL2** (for non-domestic buildings). In Scotland this in **Section 6** and in Northern Ireland it is within **Sections F1** (domestic) and **F2** (non-domestic).
The final thermal efficiency is expressed in terms of an emission rate which is calculated usually by building control, but the building regulations give guidance on: -


1. Constructing extensions, where minimum U-values as set out need to be met
2. Material change of use (for example turning a garage into a habitable room)
3. Renovations and replacements of existing insulation elements

# Building Regulations

## Meeting Building Regulations

The current regulations throughout the UK are shortly to undergo significant upgrades based on the nearly zero carbon (nZEB) initiative and will introduce lower U-value targets for walls, floors and ceilings and will also place greater importance on the continuity of insulation by incorporating a new 'fabric first' measurement to determine the efficiency of the insulation materials used. In England for example, a 31% improvement in the emissions rate target will drive these revisions however it is proposed to improve these again by the middle of the decade.

In England only there is a new standard. In addition to meeting the new Target Emission Rates, buildings now need to meet Target Fabric Energy Efficiencies. Whether a design meets the required TER and TFEE are determined by a SAP assessment but as a guide, target U-values for each of the building elements are still presented. This leaflet describes how the Marmox Multiboards are used in each application and the thicknesses required to provide the necessary U-Values to achieve compliance.

## Non-Domestic Properties

In accordance with the EU's Energy Performance of Buildings Directive (2010) the demand on the fabric of insulation of commercial buildings has increased. Building Regulations show area weighted U-values as maximum values but meeting these alone are no longer likely to be enough to comply with the overall $CO_2$ emissions requirements.

In Wales, there is a 20% aggregate improvement over 2010 levels. Northern Ireland's Part F2: 2012 is 25% better and England's Part L2 represents a 9% improvement. Scottish non-domestic regulations have always been tighter than in the rest of the UK so the 2015 improvement which averages about 12% still keeps Scotland's buildings the best insulated.

# U-values

## U-values

A U-value or 'Coefficient of Thermal Transmittance' is the rate of heat loss through a particular building element. It is measured in Watts per square metre and is multiplied by the difference in temperature of the inside of the room with the temperature on the other side of the wall or floor.

The U-value (heat loss) of an un-insulated solid wall is typically about 2.1Watts per square metre per degree difference in temperature. That means that for every degree colder the outside temperature is compared with the temperature in the house, 2.1 Watts of heat are lost through every square metre of the wall.

A 12.5mm Marmox Multiboard would reduce this heat loss to about 1.2W and a 20mm board would reduce this by over 50% to 0.9 Watts.

*Before an insulation product is used as part of a wall or floor etc. it does not have a U-value; the U-value measures the rate of heat loss from one side of part of the building to the outside.*

# U-values

## Achieving U-values are NOT what determines whether a building meets the regulations

Meeting U-value targets will probably lead to meeting the building regulations but simply meeting the U-value is not what equates to compliance. Since 2010, to comply with all UK Building Regulations the $CO_2$ emissions associated with heating the building (the Dwelling Emission Rate or DER) must be less than the Target Emission Rate or the TER.

As from 2014 to be compliant **in England only**, the calculated Dwelling Fabric Efficiency Rate **(DFEE)** must also be calculated. This must not be greater than the Target Fabric Energy Efficiency Rate as published in the building regulations. Meeting this different standard is also achieved by meeting the target U-values but this standard unlike the DER only measures the quality and performance of the insulation – it stops the practice of people compensating for having one poorly insulated wall if the wall opposite it was super insulated.

This FEE standard, or rather a modified version is present in Wales but only for non-domestic buildings, in Wales it is called Target Primary Energy Consumption, **TPEC**; this is a "fabric first" approach which concentrates on insulation not just $CO_2$ emissions.

All UK Building Regulations provide various target U-values calculated so that generally they will provide a building with the necessary insulation characteristics but different types of properties and different types of element even within the same property can have different **weighted average U-values** which need to be met.

# U-value Tables

## U-value Targets in the UK

### SCOTLAND: Section 6

The 2015 Scottish Building Standards are most efficient in the UK which means that the U-value targets are more difficult to achieve, and more insulation is needed.

- **New Builds**

| | **New Build Domestic** | *New Build Non-Domestic* |
|---|---|---|
| Element | Area weighted average U-value | *Area weighted average U-value* |
| Wall | **0.17 W/m²K** | 0.23 W/m²K |
| Floor | **0.15 W/m²K** | 0.22 W/m²K |
| Roof | **0.11 W/m²K** | 0.18 W/m²K |

- **Renovating Existing Buildings**

| Element | **Housing: refurb - extension** | *Non-Housing: refurb - extension* |
|---|---|---|
| Wall | O.22 - 0.17 W/m²K | O.30 - 0.25 W/m²K |
| Floor | 0.18 - 0.15 W/m²K | 0.25 - 0.20 W/m²K |
| Roof | 0.18 - 0.11 W/m²K | 0.25 - 0.15 W/m²K |

### ENGLAND: Part L

English Building Regulations for housing have the extra standard, Target Fabric Energy Efficiency Targets to ensure sufficient insulation is used on all parts of the building envelope.

- **New Build Domestic**

| | **New Build Domestic** | *New Build Non-Domestic* |
|---|---|---|
| Element | Area weighted average U-value | *Area weighted average U-value* |
| Wall | **0.28 W/m²K** | 0.35 W/m²K |
| Floor | **0.22 W/m²K** | 0.25 W/m²K |
| Roof | **0.16 W/m²K** | 0.25 W/m²K |

- **Renovating Existing Buildings**

| Element | **Housing: refurb - extension** | *Non-Housing: refurb - extension* |
|---|---|---|
| Wall | O.30 - 0.28 W/m²K | O.30 - 0.28 W/m²K |
| Floor | 0.25 - 0.22 W/m²K | 0.25 - 0.22 W/m²K |
| Roof | 0.18 - 0.16 W/m²K | 0.18 - 0.16 W/m²K |

## WALES: Part L

Welsh Building Regulations for non-housing have the extra standard, Target Primary Energy Consumption to ensure sufficient insulation is used on all parts of the building envelope.

- **New Build Domestic**

| | **New Build Domestic** | *New Build Non-Domestic* |
|---|---|---|
| Element | Area weighted average U-value | *Area weighted average U-value* |
| Wall | **0.21 W/m²K** | 0.26 W/m²K |
| Floor | **0.18 W/m²K** | 0.26 W/m²K |
| Roof | **0.15 W/m²K** | 0.26 W/m²K |

- **Renovating Existing Buildings**

| Element | **Housing: refurb - extension** | *Non-Housing: refurb - extension* |
|---|---|---|
| Wall | O.30 - 0.21 W/m²K | O.30 - 0.26 W/m²K |
| Floor | 0.25 - 0.18 W/m²K | 0.25 - 0.22 W/m²K |
| Roof | 0.18 - 0.15 W/m²K | 0.18 - 0.15 W/m²K |

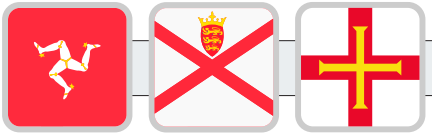
## NORTHERN IRELAND: Part F

- **New Build Domestic**

| | **New Build Domestic** | *New Build Non-Domestic* |
|---|---|---|
| Element | Area weighted average U-value | *Area weighted average U-value* |
| Wall | **0.30 W/m²K** | 0.35 W/m²K |
| Floor | **0.25 W/m²K** | 0.25 W/m²K |
| Roof | **0.25 W/m²K** | 0.25 W/m²K |

- **Renovating Existing Buildings**

| Element | **Housing: refurb - extension** | *Non-Housing: refurb - extension* |
|---|---|---|
| Wall | O.35 - 0.30 W/m²K | O.35 - 0.35 W/m²K |
| Floor | 0.25 - 0.22 W/m²K | 0.25 - 0.25 W/m²K |
| Roof | 0.35 - 0.22 W/m²K | 0.35 - 0.25 W/m²K |



## ISLE OF MAN, JERSEY, GUERNSEY

The governments of the Isle of Man Government and Channel Islands are responsible for publishing and enforcing their own building regulations which although have different U-value targets are based on the England/Wales regulations. Like in the UK, energy efficiency is measured using specifically tailored versions of SAP.

### Extensions

To achieve compliance an insulated cavity wall, significant under-floor and ceiling insulation will be required. Because Marmox Multiboards are not manufactured in thicknesses greater than 60mm, alone they are unable to provide these levels of insulation but can be used in conjunction with other materials to contribute to the overall U-values.

# Extensions and Conversions

## Material Change of Use

The conversion of a garage, or part of a garage, into habitable space will normally require approval under the Building Regulations.

When converting say a garage to a habitable room, the walls, floors and ceilings will then be considered to be part of the main dwelling and therefore will need to meet the U-value requirements commensurate with the rest of the building.

If the wall, floor or ceiling currently performs worse than the values described as “threshold U-values” (for example a wall having a U-value greater than 0.70W/m$^2$K) then it should - if technically, functionally and economically viable – be upgraded to the “Improved U-vales” that are used for renovations.
For walls this is 0.30W/m$^2$K.

If a reason can be shown why this is impractical such as it will not be physically possible to fit, or the payback is estimated to be more than 15 years then the U value should be improved to at least the “threshold value” (which for walls and floors is 0.70W/m$^2$K).

# Extensions and Conversions

## Renovations

Only if at least 50% of a walls and floors and ceilings combined are being renovated the elements should be upgraded to achieve the U-values known as “Renovation Levels” set out in Building Regulations. If just a small proportion of a property is being renovated then there is no requirement to adhere to Part L, F or 6.

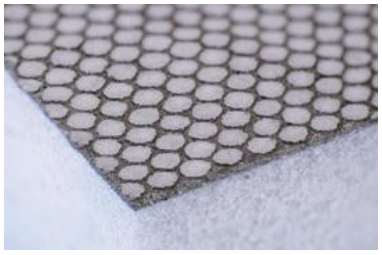
The current “Improved U-values” for walls is a slightly lesser requirement than is needed for new build. The regulations also say that these values are target values to be adhered to only if technically, functionally and economically viable.

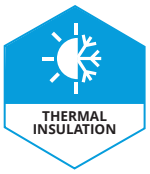
If the target U-value for any one element cannot be achieved, then improving the thermal insulation of other elements should be considered.

# Multiboard - Advantages versus Insulated Plasterboards

## Marmox Multiboard – THE Insulation Board

Marmox Multiboard has a core of XPS, an insulation material with a declared thermal conductivity (EN13164) of 0.034Watts/m.K. Multiboard is a CE Marked insulation product. The big difference between Marmox Multiboard to thermal laminates/plasterboards is that Multiboard is just a reinforced sheet of robust insulation material whereas thermal plasterboards consist of the insulation layer attached to a sheet of plasterboard.

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### Marmox Multiboard has 6 significant advantages over insulated plasterboards:

#### Advantage 1 - Thinner

Marmox Multiboard can be produced as thin as 4mm however a 4mm Marmox board provides hardly any thermal insulation. 10mm thick Marmox will provide noticeable insulation but clearly this will not be as effective as a 60mm Marmox board.


Although some top grade thermal laminates/thermal plasterboards comprise either PIR or phenolic foam which gives better insulation than XPS, those types of boards must also consist of a sheet of plasterboard that is effectively 10mm or 12mm of non-insulating material that has to be there to hold the insulation in place. With Marmox boards, there is no 12mm of plasterboard, just insulation. It is also important to note that just because Marmox boards are available in thin boards, they are not equivalent to other insulation boards which are thicker. A 10mm thickness of Marmox has equivalent insulating power to 7mm of PIR or Phenolic foam – *but those of course cannot be made in those thicknesses*.

#### Advantage 2 - Simpler to Fit

Marmox Multiboard is designed to be fitted flush against the wall. Many thermal laminates/thermal plasterboards need to be placed on battens which again increases the encroachment into the room space. This simple installation method also means that they can be fitted by virtually anyone with very basic DIY skills. Not being on battens also eliminates the void between the board and the wall which is a prime location for potentially damaging interstitial condensation to occur.

## Advantage 3 - Waterproof

The cementitious skin of the Marmox boards is moisture absorbent in order for it to be able to bind to adhesives, mortars, plaster etc. however the core is completely impermeable to water which is why Marmox Multiboard can be used as a moisture barrier.

PIR and Phenolic insulation have more effective thermal conductivities than XPS in dry conditions but the significant advantage our Marmox Multiboard has over PIR and Phenolic boards is evident if there is any dampness in the walls or floor. The effect on the thermal conductivity of Marmox Multiboard if it gets wet is negligible whereas if PIR or phenolic foam becomes wet its insulating power falls dramatically.


If phenolic foam becomes saturated it can actually become a thermal conductor having the completely opposite effect of an insulator. When using Marmox Multiboard it can always be guaranteed that the thermal insulation of an element insulated with Marmox will not deteriorate if the wall or floor becomes damp.

## Advantage 4 - Lightweight

Plasterboard is large and heavy and fitting it either on walls or on ceilings creates a massive strain on the fixings holding the board in place. A sheet of Marmox Multiboard typically weights no more than two or three kilograms so can be fixed with less fixings and confidence that it is not going to fall down.


The ease of fitting a lightweight board must not be overlooked not just in terms of health and safety but in the numbers of people and equipment needed. Installing plasterboard to a ceiling would either take a couple of people and possibly the use of ceiling supports to hold it in place. Marmox Multiboard can be fitted easily by just one person, a screwdriver, screws and some washers.

## Advantage 5 - Strong

Marmox Multiboard has a compressive strength (to EN826) of 450KPa which approximates to being able to withstand a load of 40 tonnes evenly distributed over a square metre.


## Advantage 6 - No need to prime

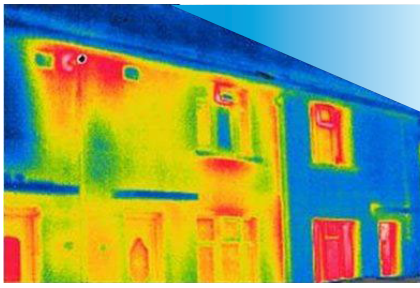
Marmox Multiboard was originally developed as a tile backer board and so with its cement-based skin has always been able to accept a tile adhesive. The unique surface of the Marmox Multiboard has both a patented keying pattern designed to give optimum grip and admixtures in the concrete layer itself to provide a much stronger surface than other foam cored tile backer boards.


The concrete skin also includes an additive which reduces the permeability of the surface and effectively pre-primes the surface for plastering. Further additives protect against ettringite formation which can happen when gypsum plasters are used on cementitious surfaces.

# Extensions and Conversions

## Internal Wall Insulation

The U-value depends on what the wall is made of and its thickness. Marmox Multiboard is the ideal internal wall insulation for all walls and especially solid walls. It has a proven track record in reducing heat loss and reducing fuel bills.



Thermal Image showing heat loss through walls

It is however difficult to attain the same levels of insulation that one would find in a newly build house because modern construction incorporates cavities than can be insulated. For example, to meet current insulation levels over 120mm of insulation would be needed. In the cavity this is fine and unseen, but it is usually too thick to have as an internal wall lining.

## Improving the Insulation of Timber Framed Walls

Typically, a timber frame wall would comprise a 140mm layer of insulation between the studs. Building Regulations require smaller U-values therefore demanding better levels of insulation. The following table shows how that in addition to insulating between the studwork, Marmox Multiboard used in place of plasterboard will reduce the heat loss.

| | Plasterboard | 12.5mm Multiboard | 20mm Multiboard | 40mm Multiboard |
|---|---|---|---|---|
| Timber Stud with 140mm mineral wool | 0.30 W/m²K | 0.28 W/m²K | 0.26 W/m²K | 0.21 W/m²K |
| Metal frame with 140mm mineral wool | 0.35 W/m²K | 0.32 W/m²K | 0.28 W/m²K | 0.24 W/m²K |

The target in England is 0.28, in Wales 0.21, in Scotland 0.17. In Scotland, insulation thicker than 60mm would be required to reach current targets.

## Insulating Solid Walls (Home Improvement)

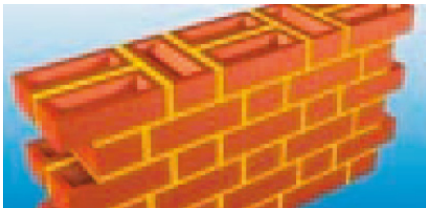
More than a third of all the heat loss in an un-insulated home is lost through the walls. Modern houses are usually built with cavity walls that can be insulated however most pre-war homes and high rise flats were built with solid walls which let the heat flood out. In fact, twice as much heat is lost through a solid wall than through an un-insulated cavity wall.

## What Thickness of Marmox Board is Required?

The thicker the board, the better the thermal insulation will be however in most situations our 60mm thick board would be impractical because that would take up too much space and block your windows. The most popular are thicknesses for I.W.I. are 30mm, 20mm and 12.5mm.

## How to identify whether you have solid walls?

Solid walls are mainly made of brick or stone and are found in most houses built before 1940. The easiest way to tell is from the pattern of the bricks on the outside of your house. If your home has solid walls, the bricks will tend to be placed head-on and lengthways in an alternating pattern like this.



*With the majority of solid walled properties, Marmox Multiboard will significantly reduce heat loss but not provide similar insulation to meet the current EU target values for new homes.*

With an assumed temperature difference of 10°C from the inside to the outside of the house, this table shows the approximate U-values achieved using various thicknesses of Marmox Multiboard on a solid brick wall 220mm thick and on an unfilled cavity wall – brick leaf and a concrete block leaf.

| Thickness of Multiboard | Solid Brick Wall | | Unfilled Cavity Wall | |
|---|---|---|---|---|
| | No Insulation | With Marmox | No Insulation | With Marmox |
| 10mm | 2.1 Watts | 1.3 Watts | 1.6 Watts | 1.1 Watts |
| 20mm | | 0.9 Watts | | 0.8 Watts |
| 40mm | | 0.6 Watts | | 0.5 Watts |
| 60mm | | 0.4 Watts | | 0.4 Watts |

Our technical department will be happy to calculate U-values for any specific requirements you have.

# Improving U-values of floors

## Improving U-values of floors

The U-value depends on various things including: ***1)*** *What the floor is made of* ***2)*** *Whether it is suspended or on the ground* ***3)*** *The thickness of the perimeter walls* ***4)*** *What lies beneath*

The main factor is the ratio between the area and the "exposed perimeter" – which is the perimeter length of outside walls only.
The other thing that needs taking into account is the temperature difference between the outside and inside the house.

Typically, for comparison purposes, a difference of 10°C is used and the desired U value for a floor in a new build is 0.25 Watts per square metre per temperature difference between the outside and the inside. In a refurbishment, the maximum recommended value is 0.35W/m$^2$K.

This table shows the thickness of Marmox Multiboard necessary to achieve these specific U-values if the floor is a concrete slab on the ground. The P:A ratio is the main factor so although the values change for different floor types, they will be reasonably similar to these figures.

| P:A Ratio | *U-value of existing floor without insulation (W/m$^2$K)* | Thickness of Marmox Multiboard (mm) needed to achieve these U-values | | | | |
|---|---|---|---|---|---|---|
| | | 0.40 | 0.35 | 0.30 | 0.25 | 0.20 |
| 1:6 | 0.31 | Unnecessary | 4mm | 4mm | 20mm | 50mm |
| 1:5 | 0.36 | Unnecessary | 6mm | 10mm | 30mm | 60mm |
| 1:3 | 0.51 | 20mm | 30mm | 30mm | 60mm | N/A |
| 1:2 | 0.67 | 30mm | 40mm | 50mm | N/A | N/A |
| 1:1.5 | 0.82 | 40mm | 50mm | 60mm | N/A | N/A |
| 1:1 | 1.00 | 40mm | 60mm | N/A | N/A | N/A |
| 1:$^{1/2}$ | 1.35 | 50mm | 60mm | N/A | N/A | N/A |

# As an external base for render

All Marmox Multiboards comprise a core of waterproof polystyrene providing high levels of thermal insulation and a skin of a frost-resistant polymer-concrete. The skin is designed to offer the optimum level of porosity to allow cement-based, lime-based and silicone-based render systems to bond to it. Because they are unaffected by variations in temperature, being submerged in water or frost, they can be used externally on walls to provide a layer of waterproof, insulating cladding which can be rendered upon.

## General Advice – applying a simple sand/cement render

The board has a textured concrete surface and as such can be rendered as any concrete surface can be. Typically, a conventional mesh is still required to be placed over the whole surface area of the boards. The mesh is generally pressed into the base layer of render however different render suppliers will have their own application instructions which must be followed. The method to be followed is as though rendering onto a concrete surface. Marmox Multiboards can be fixed directly onto solid masonry walls, concrete, window reveals etc. They are fixed to these masonry surfaces with a continuous bed of cement-based tile adhesive.

Marmox Multiboards can also be fixed onto battens.
If fixing onto timber battens, **you must be confident that there will be no movement in your timbers** as that could result in hairline cracks between the boards. Using any small render boards such as Marmox boards (which have proportionally more board edges and therefore joins than a large sheet does) are not ideal on timber framed structures. This is because of potential movement in the frame which could result in cracks in the render developing between each board.

### Typical application on timber battens...

- Fix to battening every 30cm.
- A breather membrane should be included on the masonry if placing the boards on battens.
- The thinnest Marmox Multiboards which can be used for this application is 12.5mm - they should be fixed so that there is absolutely no movement whatsoever in the boards.
- Boards should be laid with staggered joints and fixed using screws and washers every 30mm along each timber. All vertical and horizontal edges of the board must be supported.
- Place a dab of Marmox MSP360, the waterproof sealant over each screw hole prior to inserting the screw.
- A 5mm gap between vertically and horizontally laid boards should be left and filled with Marmox MSP-360.
- To stop curing issues over the board joints, seal the boards together with Marmox MSP360.
- A mesh must cover the complete surface of the boards prior to applying the render, not just the joints. Around corners of window and door frames, additional mesh should be placed at 45$^{o}$.
- The boards can now be rendered according to the manufacturers' instructions.

Marmox Multiboard as an external render base board is non-breathable so will stop water vapour generated within the building escaping through the normal path (through the walls). This could result in both surface and interstitial condensation within the structure therefore measures must be taken to improve the ventilation.

Not suitable for use with Rainscreen cladding or over 18m high (England & Wales) 12m high (Scotland)


- Wall & floor solutions
- Highly insulating
- Fully waterproof
- Quick & easy installation
- Lightweight, easy to cut
- Marmox Lifetime Guarantee
- BBA Certified & CE marked as an insulation board





For information and advice on Marmox Multiboard please contact us today:

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