

Specifications for Tile Backer Board wall and floor applications



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Product Ref: **Marmox Multiboard** – 600mm wide, 1250mm, 4, 6, 10, 12.5, 20, 30, 40, 50, 60mm thick. Also known as Marmox Board-Pro and Marmox Construction Board

Product Use: Internal and external tile backer board.

Product Ref: **Marmox SoundBoard** – 600mm wide, 1250mm, 8, 12mm thick. Also known as Marmox Board CS1

Product Use: Internal, sound isolating tile backer board.

1. General Information

This document provides a general introduction to the installation of Marmox tile backer boards (*Multiboard and SoundBoard*) with common information and British Standards followed by links to specific method statements for fitting to various applications.

The standard specifications listed are for dry to semi-dry applications. For wetrooms and areas where “tanking” is required, please refer to section 5.2 for additional advice.

1.1 BS5385: 1, 2 & 3

WALLS

This British Standard should be considered when installing Marmox Multiboard on internal walls when specifying intermediate layers between the Marmox board and the floor or the wall/frame (*for example, placing a layer of plasterboard or timber between a stud frame and the Marmox*).

BS5385 recommends that *“The backs and edges of boards prone to expansion/contraction should be treated against the ingress of atmospheric moisture that would result in movement and warping.”* The Marmox board represents a waterproof layer but it is important to seal the boards together to create a complete waterproof barrier otherwise the material behind the Marmox could get damp and expand. Consideration should be given to reducing the ingress of moisture to the back surfaces of any sub-layers if this is considered a risk.

FLOORS

BS5385 recommends that: “If a timber sub-floor has to be used as a base for floor tiling, it should be rigid and stable with respect to humidity and moisture changes and should meet the following criteria:

- Sufficiently strong and rigid
- Dead load of up to 0.8kN/m², plus the probably dynamic loading without deflection
- The floor should not deflect more than the span divided by 360
- Floors should be rigid and stable without compressive or deflective movement. If a floor shows any deflection, it cannot be tiled with or without a Marmox board.

Specifications for Tile Backer Board wall and floor applications

1.2 Storage

Marmox Multiboards and SoundBoards must always be stored flat. The boards should be left in their original packaging until being used to keep them clean and dust free.

2. Floor and Wall Application

On floors and on solid walls, Marmox Multiboard is fixed as if it were a large tile – with tile adhesive. It is advisable to avoid voids between the Marmox board and the wall so a continuous bed of tile adhesive (*applied with a notched trowel in straight lines, not swirls*) is recommended, certainly when the wall is flat enough. For less flat wall, dotting and dabbing (*with tile adhesive not plasterboard adhesive*) reinforced with a mechanical fixing is recommended and the boards can also be put directly onto a metal or timber frame.

The following links are to the specific Specification:

Subsequent numbers are the appropriate board thicknesses (i.e. IW1-4-60 relates to board thicknesses 4 – 60mm)

2.1 IW = Internal Wall - Tile Backer Board (*short boards, 1250mm long*)

[Click on the reference below to see the specification sheet](#)

- IW1-4-60** concrete, concrete (*not aircrete*) block and brick substrate (flat) – *fixed with adhesive*
- IW2-12-60** concrete, concrete (*not aircrete*) block and brick substrate (uneven) – *fixed mechanically*
- IW3-4-60** onto an aircrete block wall – *fixed with adhesive and mechanically*
- IW4-4-10** onto a plastered wall - *fixed with adhesive and mechanically*
- IW5-10-12** direct onto a timber or metal frame - *with 300 / 400mm centres*
- IW5-20-60** direct onto a timber or metal frame - *with 600mm centres*
- IW6-4-60** onto an intermediate plywood layer on a timber/metal frame - *fixed with adhesive*
- IW6-12-60** onto an intermediate plywood layer on a timber/metal frame - *fixed mechanically only*
- IW7-10-12** onto an intermediate plasterboard layer on a timber/metal frame - *fixed mechanically only*
- IW7-20-60** onto an intermediate plasterboard layer on a timber/metal frame - *fixed mechanically only*

2.2 EW = External Wall - Tile Backer Board (*short boards, 1250mm long*)

[Click on the reference below to see the specification sheet](#)

- EW1-12-60** onto a concrete, concrete block and brick substrate (flat) – *fixed with adhesive only*
- EW2-12-60** onto an aircrete block wall – *fixed with adhesive and mechanically*
- EW3-12-60** onto a rendered wall - *fixed with adhesive and mechanically*
- EW5-12-60** onto an intermediate plywood layer on a timber/metal frame - *fixed mechanically only*

Specifications for Tile Backer Board wall and floor applications

2.3 IF = Internal Floor - Tile Backer Board (*short boards, 1250mm long*)

[Click on the reference below to see the specification sheet](#)

- IF1-4-60** onto a concrete floor – *fixed with adhesive only*
- IF2-4-60** onto plywood sheet flooring – *fixed with adhesive OR mechanically*
- IF3-4-60** onto chipboard/OSB flooring panels – *fixed with adhesive and mechanically*
- IF4-10-60** on traditional floorboards – *fixed with adhesive only*
- IF5-6-60** onto raised access flooring – *fixed with adhesive only*

2.4 Marmox SoundBoard on floors –

2.4 SB = Internal Floor – Acoustic Tile Backer Board

[Click on the reference below to see the specification sheet](#)

A waterproof, decoupling and thermally insulating tile backer board which also provides impact noise insulation stopping impact sound from being heard in the room below.

- SF1-8-12** onto a concrete/timber floor – *fixed with adhesive only*

3. Under Tile Heating Systems

Electric underfloor heating systems can be fitted to any Marmox board on a floor, carried out to these specifications. The following instructions should be added.

- Cover the joints between boards with reinforcing tape (*scrim tape*.) Leave a 5mm gap around the edge and fill with Marmox Multibond.
- Fix the electric under tile heating mat/cables directly onto the Marmox board.
- Pour a self-levelling compound directly onto the Marmox boards (*some self-levelling compound suppliers recommend that the boards are primed – this is not usually essential with a Marmox board but their instructions should be followed to validate their guarantees*).
- Cover with just enough material to conceal the heating elements.

5. Treatment

5.1 Cutting the boards

Marmox Multiboards can be cut easily in straight lines using either a hand-saw or sored and snapped with a Stanley knife. The board can be cut into more intricate shapes using a jig-saw.

Board edges can only be cut at 90° to the surface, i.e. they cannot be mitred.

Specifications for Tile Backer Board wall and floor applications

5.2 Waterproofing

All standard specifications state that all joints should be covered with scrim (reinforcing) tape.

For very wet internal areas (*e.g. the floor in a shower, the wall to floor junction in a wetroom, splash pools*), Marmox Self-adhesive **Waterproof Tape should be used instead of scrim tape.**

This is a butyl based self-adhesive material which will form a physical waterproof barrier. If Multibond or MSP360 has spilled over areas of boards' surface, this tape will still stick firmly to those areas.

In wetrooms, the use of waterproof corners are often recommended. These corners are not self-adhesive but are fixed using Multibond or MSP360. Like with the S/A waterproof tape, these corners should be used instead of the scrim tape.

5.3 Expansion Joints

In the above specifications, 5mm gaps are left around the perimeter of the Marmox boarding which is filled with deformable Marmox Multibond.

Additional expansion joints in the floor should be continued through the Marmox layer and into the tiling.

5.4 Tiling

Cement based tile adhesives should be used. On floors, flexible versions (also known as C2 grade) are recommended.

5.5 Minimum Tile Sizes on Floors

Small mosaic tiles are not suitable for use on Marmox Multiboards or SoundBoards, the smallest tiles which can be used are 50mm x 50mm

Specification: Tile backer board on external concrete, concrete block (*not aircrete*) or brick Walls

Product Ref: Marmox Multiboard

Product Use: Intermediate substrate to ceramic and stone tiling external masonry walls.

Manufacturer: Marmox Ltd

Address: Marmox UK Ltd, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP.
01634 835290; Email: info@marmox.co.uk; <http://www.marmox.co.uk/>.

Description: Extruded polystyrene covered on both sides with fibreglass mesh encased in a c.0.75mm layer of polymer modified concrete which permanently bonds the mesh to the polystyrene.

Dimensions: Width = 600mm, Length = 1250mm, Thickness = 12.5/20/30/40/50/60mm
(Thinnest board suitable for this application = 12.5mm)

Properties: Decoupling between the tiled surface and the sub-structure.
Thermal Insulation unaffected by moisture, temperature including freezing.
Waterproofing,
Enhanced tile adhesion

Authorities: BBA Certified (09/4687), ISO9001 (Bureau Veritas), Energy Saving Trust Recommended for insulation.
BS EN 5385-2: Code of practice for the design and installation of external ceramic wall tiling.

CE Marking: EN13164 – T1 – CS(10\Y)400 – CC(2/1/10)115 – WL(T)3

General Advice **The Marmox board is fixed to the masonry with tile adhesive**

The masonry wall should be constructed to relevant building standards and not be coated or covered with any surface covering, for example paint, plaster.

Bonded directly to the masonry

- The masonry should be primed in accordance with the adhesive manufacturer's recommendations.
- Boards can be aligned vertically or horizontally in a staggered (*Brick-bond*) format.
- **Marmox Multiboards, 600mm x 1250mm x 12.5/20/30/40/50/60 mm is fixed onto a continuous bed of external grade tile adhesive (3-5mm thick).**
- A bead of Marmox MSP360 sealant is applied to all board edges.
- For tiling above first storey height (or 2 metres above the ground), the boards are also be mechanically fixed with screws and washers positioned every 300mm.
- All screw-fixings are sealed with Marmox MSP360 sealant.
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

- Notes:**
- 1) All connections to building features e.g. window frames, are sealed with Marmox MSP360.
 - 2) Sealing the boards together with Marmox exterior grade sealant ensures a continuous waterproof barrier protecting against ingress of water.
 - 3) A 5mm movement gap should be created between the Multiboard and any restraining surface of 5mm which should be filled with Marmox MSP360.
 - 4) Applying the tile adhesive in straight lines using a 6/8mm trowel will an even and continuous layer without voids as voids can result in differential curing of the adhesive and increase the risk of interstitial condensation.

Specification: Tile backer board on external concrete, concrete block (*not aircrete*) or brick Walls

- Limitations:**
- 1) Compounds containing organic solvents must not come into contact with Marmox board.
 - 2) Temperatures in excess of 75°C are not appropriate.
 - 3) Fixing by the dot and dab method (*using tile adhesive and concrete dowels*) is not allowed for external use as this will create a void behind the boards as indeed would applying a continuous bed of adhesive with a swirling action instead of in straight lines.
 - 4) The top edges of large format tiles should not line up with the top edge of the Marmox board but be placed over the joints of two or more Marmox boards.

Specification: Tile backer board (12.5mm and thicker) on external aircrete Walls

Product Ref: Marmox Multiboard

Product Use: Intermediate substrate to ceramic and stone tiling external walls.

Manufacturer: Marmox Ltd

Address: Marmox UK Ltd, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP.
01634 835290; Email: info@marmox.co.uk; <http://www.marmox.co.uk/>.

Description: Extruded polystyrene covered on both sides with fibreglass mesh encased in a c.0.75mm layer of polymer modified concrete which permanently bonds the mesh to the polystyrene.

Dimensions: Width = 600mm, Length = 1250mm, Thickness = 12.5/20/30/40/50/60mm
(Thinnest board suitable for this application = 12.5mm)

Properties: Decoupling between the tiled surface and the sub-structure.
Thermal Insulation unaffected by moisture, temperature including freezing.
Waterproofing,
Enhanced tile adhesion

Authorities: BBA Certified (09/4687), ISO9001 (Bureau Veritas), Energy Saving Trust Recommended for insulation.
BS EN 5385-2: Code of practice for the design and installation of external ceramic wall tiling.

CE Marking: EN13164 – T1 – CS(10\Y)400 – CC(2/1/10)115 – WL(T)3

General Advice **The Marmox board is fixed to the blocks with tile adhesive and fixings**

The masonry wall should be constructed to relevant building standards and not be coated or covered with any surface covering, for example paint, plaster.

Bonded directly to the masonry

- The aircrete blocks should be primed in accordance with the adhesive manufacturer's recommendations.
- Boards can be aligned vertically or horizontally in a staggered (*Brick-bond*) format.
- **Marmox Multiboards, 600mm x 1250mm x 12.5/20/30/40/50/60 mm is fixed onto a continuous bed of external grade tile adhesive (3-5mm thick).**
- **After curing, the bonding is reinforced with fifteen screws and washers** (*screws + plugs suitable for aircrete blocks*) – every 300mm including all board edges are supported. (*As an alternative to screws, washers and plugs, Marmox Dowel fixings may be used*)
- A bead of Marmox MSP360 is applied to all board edges.
- All screw-fixings are sealed with Marmox MSP360.
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

Notes: 1) All connections to building features e.g. window frames, are sealed with Marmox MSP360.

2) Sealing the boards together with Marmox exterior grade sealant ensures a continuous waterproof barrier protecting against ingress of water.

3) A 5mm movement gap should be created between the Multiboard and any restraining surface of 5mm which should be filled with Marmox MSP360.

Specification: Tile backer board (12.5mm and thicker) on external aircrete Walls

4) Applying the tile adhesive in straight lines using a 6/8mm trowel will an even and continuous layer without voids as voids can result in differential curing of the adhesive and increase the risk of interstitial condensation.

Limitations:

- 1) Compounds containing organic solvents must not come into contact with Marmox board.
- 2) Temperatures in excess of 75°C are not appropriate.
- 3) Fixing by the dot and dab method (*using tile adhesive and concrete dowels*) is not allowed for external use as this will create a void behind the boards as indeed would applying a continuous bed of adhesive with a swirling action instead of in straight lines.
- 4) The top edges of large format tiles should not line up with the top edge of the Marmox board but be placed over the joints of two or more Marmox boards.

Specification: Tile backer board (12.5mm + thicker) on external rendered Walls

Product Ref:	Marmox Multiboard
Product Use:	Intermediate substrate to ceramic and stone tiling external walls.
Manufacturer:	Marmox Ltd
Address:	Marmox UK Ltd, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP. 01634 835290; Email: info@marmox.co.uk ; http://www.marmox.co.uk/ .
Description:	Extruded polystyrene covered on both sides with fibreglass mesh encased in a c.0.75mm layer of polymer modified concrete which permanently bonds the mesh to the polystyrene.
Dimensions:	Width = 600mm, Length = 1250mm, Thickness = 12.5/20/30/40/50/60mm (Thinnest board suitable for this application = 12.5mm)
Properties:	Decoupling between the tiled surface and the sub-structure. Thermal Insulation unaffected by moisture, temperature including freezing. Waterproofing, Enhanced tile adhesion
Authorities:	BBA Certified (09/4687), ISO9001 (Bureau Veritas), Energy Saving Trust Recommended for insulation. BS EN 5385-2: Code of practice for the design and installation of external ceramic wall tiling.
CE Marking:	EN13164 – T1 – CS(10\Y)400 – CC(2/1/10)115 – WL(T)3
General Advice	The Marmox board is fixed to the rendered wall with tile adhesive and fixings The rendering must be level and sound with any damaged or loose areas of render repaired and filled.

Bonded directly to an existing render coating

- The rendered surface must be sound and relatively flat and be primed in accordance with the tile adhesive manufacturer's recommendations.
- Boards can be aligned vertically or horizontally in a staggered (*Brick-bond*) format.
- **Marmox Multiboard 600mm x 1250mm x 12.5/20/30/40/50/60 mm is fixed onto a continuous bed of external grade tile adhesive (3-5mm thick).**
- **After curing, the bonding is reinforced with fifteen screws and washers** (*screws + plugs suitable for aircrete blocks*) – every 300mm including all board edges are supported. (*As an alternative to screws, washers and plugs, Marmox Dowel fixings may be used*)
- A bead of Marmox MSP360 is applied to all board edges.
- All screw-fixings are sealed with Marmox MSP360.
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

- Notes:**
- 1) If the rendered wall is uneven, consideration should be removing the render and fitting the boards directly on the masonry
 - 2) Using a frame to fix the boards above a rendered wall is not ideal as that would encourage moisture to concentrate within the render.
 - 3) Any secondary coating (e.g. paint) on the render coating should be removed.
 - 4) All connections to building features e.g. window frames, are sealed with Marmox MSP360.

Specification: Tile backer board (12.5mm + thicker) on external rendered Walls

- 5) Sealing the boards together with Marmox exterior grade sealant ensures a continuous waterproof barrier protecting against ingress of water.
- 6) A 5mm movement gap should be created between the Multiboard and any restraining surface of 5mm which should be filled with Marmox MSP360.
- 7) Applying the tile adhesive in straight lines using a 6/8mm trowel will an even and continuous layer without voids as voids can result in differential curing of the adhesive and increase the risk of condensation within the render.

Limitations:

- 1) Compounds containing organic solvents must not come into contact with Marmox board.
- 2) Temperatures in excess of 75°C are not appropriate.
- 3) Fixing by the dot and dab method (*using tile adhesive and concrete dowels*) is not allowed for external use as this will create a void behind the boards as indeed would applying a continuous bed of adhesive with a swirling action instead of in straight lines.
- 4) The top edges of large format tiles should not line up with the top edge of the Marmox board but be placed over the joints of two or more Marmox boards.

Specification: Tile backer board on external timber /metal framed walls clad with plywood

Product Ref: Marmox Multiboard

Product Use: Intermediate substrate to ceramic and stone tiling external walls.

Manufacturer: Marmox Ltd

Address: Marmox UK Ltd, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP.
01634 835290; Email: info@marmox.co.uk; <http://www.marmox.co.uk/>.

Description: Extruded polystyrene covered on both sides with fibreglass mesh encased in a c.0.75mm layer of polymer modified concrete which permanently bonds the mesh to the polystyrene.

Dimensions: Width = 600mm, Length = 1250mm, Thickness = 12.5/20/30/40/50/60mm
(Thinnest board suitable for this application = 12.5mm)

Properties: Decoupling between the tiled surface and the sub-structure.
Thermal Insulation unaffected by moisture, temperature including freezing.
Waterproofing,
Enhanced tile adhesion

Authorities: BBA Certified (09/4687), ISO9001 (Bureau Veritas), Energy Saving Trust Recommended for insulation.
BS EN 5385-2: Code of practice for the design and installation of external ceramic wall tiling.

CE Marking: EN13164 – T1 – CS(10\Y)400 – CC(2/1/10)115 – WL(T)3

General Advice **The Marmox board is fixed to the frame through the 18mm plywood with screws and washers.** The metal or timber frame should be constructed to relevant building standards and not demonstrate any deflection.

Bonded directly to timber clad metal or timber framed wall

A) Boards aligned vertically

- The stud frame is constructed not to defect after the installation of the 18mm plywood, additional horizontal noggins may be required to improve the resistance to deflection.
- Studs may be a maximum of 300mm apart.
- Boards should be aligned in a staggered (*Brick-bond*) format (*each board will be fixed to three vertical studs with 5 screws + washers per stud, 15 fixings per board*)
- Marmox Multiboards, 600mm x 1250mm x 12.5/20/30/40/50/60 mm aligned vertically in a staggered format are fixed using both a thin (2 – 3mm) bed of external grade tile adhesive and corrosion resistant screws + Marmox Washers through the plywood into the each vertical timber/metal stud.
- A bead of Marmox MSP360 is applied to all board edges so that it forms a waterproof seal between adjacent boards and all screw-fixings are sealed with Marmox exterior grade sealant.
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

B) Boards aligned horizontally

- The stud frame is constructed not to defect after the installation of the 18mm plywood, additional horizontal noggins may be required to improve the resistance to deflection.
- Boards should be supported on by three studs with both short edges supported, centres should match-up with the board size should be c.400mm apart.
- Boards should be aligned in a staggered (*Brick-bond*) format and to ensure all short edges are supported (*each board will be fixed to three vertical studs with 3 screws + washers, 9 fixings per board*)
- Marmox Multiboards, 600mm x 1250mm x 20/30/40/50/60mm aligned horizontally in a staggered format are fixed using both a thin (2 – 3mm) bed of external grade tile adhesive and are fixed using corrosion resistant screws + Marmox Washers through the plasterboard into the each vertical timber/metal stud.

Specification: Tile backer board on external timber /metal framed walls clad with plywood

- A bead of Marmox MSP360 is applied to all board edges so that it forms a waterproof seal between adjacent boards and all screw-fixings are sealed with Marmox exterior grade sealant.
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

Notes:

- 1) Sealing the boards together with Marmox exterior grade sealant ensures a continuous waterproof barrier protecting against ingress of water. The plywood MUST be protected against ingress of water through the board junctions. The Marmox board is waterproof so could trap any moisture under the surface which could swell the plywood and push against the Marmox board and possibly dislodge the tiling.
- 2) The inclusion or omission of a primary waterproof/vapour-proof barrier on or behind the frame should be considered in the light of fact that the Marmox layer is acting as a virtual vapour barrier
- 3) The layer of Marmox is waterproof and therefore could trap water within the plywood without adequate ventilation.
- 4) All connections to building features e.g. window frames, are sealed with Marmox MSP360.
- 5) A 5mm movement gap should be created between the Multiboard and any restraining surface of 5mm which should be filled with Marmox MSP360.

Limitations:

- 1) Compounds containing organic solvents must not come into contact with Marmox board.
- 2) Temperatures in excess of 75°C are not appropriate.
- 3) Fixing by the dot and dab method (*using tile adhesive and concrete dowels*) is not allowed for external use as this will create a void behind the boards as indeed would applying a continuous bed of adhesive with a swirling action instead of in straight lines.
- 4) The top edges of large format tiles should not line up with the top edge of the Marmox board but be placed over the joints of two or more Marmox boards.

Specification: Tile backer board on a concrete floor

- Product Ref:** Marmox Multiboard
- Product Use:** Intermediate substrate to ceramic and stone tiling on a concrete floor.
- Manufacturer:** Marmox Ltd
Address: Marmox UK Ltd, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP.
01634 835290; Email: info@marmox.co.uk; <http://www.marmox.co.uk/>.
- Description:** Extruded polystyrene covered on both sides with fibreglass mesh encased in a c.0.75mm layer of polymer modified concrete which permanently bonds the mesh to the polystyrene.
- Dimensions:** Board Width = 600mm, Board Length = 1250mm, Thickness = 4/6/10/12.5/20/30/40/50/60mm
(Thinnest board suitable for this application = 4mm)
- Properties:** Decoupling between the tiled surface and the sub-structure.
Thermal Insulation unaffected by moisture, temperature including freezing.
Waterproofing,
Enhanced tile adhesion
- Authorities:** BBA Certified (09/4687), ISO9001 (Bureau Veritas), Energy Saving Trust Recommended for insulation.
BS EN 5385-1: Code of practice for the design and installation of internal floor tiling.
- CE Marking:** EN13164 – T1 – CS(10\Y)400 – CC(2/1/10)115 – WL(T)3

General Advice **The Marmox board is fixed to the floor with tile adhesive**
Marmox boards are fixed to the floor using a continuous thin bed of tile adhesive.

- The concrete floor should be level, secure and clean.
- Marmox Multiboard is fixed to the concrete floor on a continuous bed of flexible cement-based tile adhesive applied with a 6/8mm trowel.
- Boards are configured in a brick-bond pattern when possible.
- A line of Marmox Multibond along each board edge seals the boards together making a waterproof barrier.
- A 5mm gap is left between the boards and the wall which is filled with Marmox Multibond.
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

Notes: 1) Unless the concrete of the floor is of very poor quality unlikely to provide a good key for the adhesive, it is not necessary to also use mechanical fixings. Screws and washers are counter-productive because a) they pierce the waterproof barrier and b) they reduce the flexibility of the foam core which is there to absorb lateral movement in the subfloor to prevent tile/grout cracking.
If additional mechanical fixings are needed, typically five per board (*one in each corner and one in the middle*) are used.

Limitations: 1) Compounds containing organic solvents (*including organic based tile sealants*) must not come into contact with Marmox board.

3) Temperatures in excess of 75°C are not appropriate.

Specification: Tile backer board on a Plywood sheet flooring

- Product Ref:** Marmox Multiboard (4/6/10/12.5/20/30/40/50/60mm), Marmox Washers, Marmox Multibond
- Product Use:** Intermediate substrate to ceramic and stone tiling on a plywood sub-floor.
- Manufacturer:** Marmox Ltd
- Address:** Marmox UK Ltd, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP.
01634 835290; Email: info@marmox.co.uk; <http://www.marmox.co.uk/>.
- Description:** Extruded polystyrene covered on both sides with fibreglass mesh encased in a c.0.75mm layer of polymer modified concrete which permanently bonds the mesh to the polystyrene.
- Dimensions:** Board Width = 600mm, Board Length = 1250mm, Thickness = 4/6/10/12.5/20/30/40/50/60mm
(Thinnest board suitable for this application = 4mm)
- Properties:** Decoupling between the tiled surface and the sub-structure.
Thermal Insulation unaffected by moisture, temperature including freezing.
Waterproofing,
Enhanced tile adhesion
- Authorities:** BBA Certified (09/4687), ISO9001 (Bureau Veritas), Energy Saving Trust Recommended for insulation.
BS EN 5385-1: Code of practice for the design and installation of internal floor tiling.
- CE Marking:** EN13164 – T1 – CS(10\Y)400 – CC(2/1/10)115 – WL(T)3

General Advice The Marmox board is fixed to 18mm plywood floor with either tile adhesive or screws and washers
Marmox boards are fixed to the floor using a continuous thin bed of tile adhesive.

USING TILE ADHESIVE

- The plywood should be at least 18mm and primed if recommended by the tile adhesive manufacturer.
- Marmox Multiboard 600 X 1250 X 4/6/10/12.5/20/30/40/50/60mm is fixed to the plywood with a continuous bed of flexible cement-based tile adhesive applied with a 6/8mm trowel.
- Boards are configured in a brick-bond pattern when possible.
- A line of Marmox Multibond along each board edge seals the boards together making a waterproof barrier.
- A 5mm gap is left between the boards and the wall which is filled with Marmox Multibond.
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

MECHANICALLY FIXINGS

- Marmox Multiboard, 600 X 1250 X 4/6/10/12.5/20/30/40/50/60mm is fixed to the 18mm plywood using screws and Marmox washers at 300mm centres (*15 fixings per board – irrespective of board thickness*).
- Boards are configured in a brick-bond pattern when possible.
- A line of Marmox Multibond along each board edge seals the boards together making a waterproof barrier.
- A 5mm gap is left between the boards and the wall which is filled with Marmox Multibond.
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

Specification: Tile backer board on a Plywood sheet flooring

Notes:

1) Using Screws and washers is less effective than using tile adhesive to fix the boards with. Mechanical fixings are counter-productive because a) they pierce the waterproof barrier and b) they reduce the flexibility of the foam core which is there to absorb lateral movement in the subfloor to prevent tile/grout cracking.

2) To create a complete waterproof barrier, using a 'mastic gun' apply a bead of Marmox Multibond down each edge as the boards are being laid. Cover the joints between boards with reinforcing tape (*scrim tape*.) Leave a 5mm gap around the edge and fill with Marmox Multibond.

Limitations:

1) Compounds containing organic solvents (*including organic based tile sealants*) must not come into contact with Marmox board.

3) Temperatures in excess of 75°C are not appropriate.

Specification: Tile backer board on a OSB or Chipboard sheet flooring

Product Ref: Marmox Multiboard

Product Use: Intermediate substrate to ceramic and stone tiling on a chipboard or OSB sub-floor.

Manufacturer: Marmox Ltd

Address: Marmox UK Ltd, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP.
01634 835290; Email: info@marmox.co.uk; <http://www.marmox.co.uk/>.

Description: Extruded polystyrene covered on both sides with fibreglass mesh encased in a c.0.75mm layer of polymer modified concrete which permanently bonds the mesh to the polystyrene.

Dimensions: Board Width = 600mm, Board Length = 1250mm, Thickness = 4/6/10/12.5/20/30/40/50/60mm
(Thinnest board suitable for this application = 4mm)

Properties: Decoupling between the tiled surface and the sub-structure.
Thermal Insulation unaffected by moisture, temperature including freezing.
Waterproofing,
Enhanced tile adhesion

Authorities: BBA Certified (09/4687), ISO9001 (Bureau Veritas), Energy Saving Trust Recommended for insulation.
BS EN 5385-1: Code of practice for the design and installation of internal floor tiling.

CE Marking: EN13164 – T1 – CS(10\Y)400 – CC(2/1/10)115 – WL(T)3

General Advice: The Marmox board is fixed to the floor with tile adhesive and fixings

Plywood is a superior and safer timber to apply a Marmox board to but if it can be kept dry, 18mm OSB and chipboard can be used. Marmox boards are fixed to the timber using a continuous thin bed of tile adhesive with additional screws (*specific for chipboard*) and washers.

- The sheet flooring floor should be at least 18mm thick, level, secure, clean and if recommended by the tile adhesive manufacturer, primed. Always check that the tile adhesive is suitable for use on OSB / chipboard.
- Marmox Multiboard is fixed to the timber on a continuous bed of flexible cement-based tile adhesive applied with a 6/8mm trowel.
- Boards are configured in a brick-bond pattern when possible.
- Five screws and Marmox washers per board (*one in each corner and one in the middle*) are fixed after the adhesive has cured.
- These screw fixings are sealed with a dab of Multibond prior to tiling.
- A line of Marmox Multibond along each board edge seals the boards together making a waterproof barrier.
- A 5mm gap is left between the boards and the wall which is filled with Marmox Multibond.
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

Notes: 1) The chipboard / OSB **MUST** be protected against ingress of water through the board junctions. Failure to do so could result in the degradation of the timber resulting in the fixings becoming loose or the timber swelling and disrupting the tiling. A generous bead of Marmox Multibond (*mastic*) is applied to all board edges during installation and will also act as an adhesive.

Limitations: 1) Compounds containing organic solvents (*including organic based tile sealants*) must not come into contact with Marmox board.

3) Temperatures in excess of 75°C are not appropriate.

Specification: Tile backer board on a traditional floorboards

- Product Ref:** Marmox Multiboard
- Product Use:** Intermediate substrate to ceramic and stone tiling on a floor comprising separate traditional floorboards.
- Manufacturer:** Marmox Ltd
Address: Marmox UK Ltd, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP.
01634 835290; Email: info@marmox.co.uk; <http://www.marmox.co.uk/>.
- Description:** Extruded polystyrene covered on both sides with fibreglass mesh encased in a c.0.75mm layer of polymer modified concrete which permanently bonds the mesh to the polystyrene.
- Dimensions:** Board Width = 600mm, Board Length = 1250mm, Thickness = 10/12.5/20/30/40/50/60mm
(Thinnest board suitable for this application = 10mm)
- Properties:** Decoupling between the tiled surface and the sub-structure.
Thermal Insulation unaffected by moisture, temperature including freezing.
Waterproofing,
Enhanced tile adhesion
- Authorities:** BBA Certified (09/4687), ISO9001 (Bureau Veritas), Energy Saving Trust Recommended for insulation.
BS EN 5385-1: Code of practice for the design and installation of internal floor tiling.
- CE Marking:** EN13164 – T1 – CS(10\Y)400 – CC(2/1/10)115 – WL(T)3

General Advice **The Marmox board is fixed to the floorboards with tile adhesive.**

Marmox boards are fixed to the floor using a continuous thin bed of tile adhesive and no mechanical fixings.

- The floorboards must be movement-free exhibiting no flexing or any vertical movement.
- The floorboards should be primed if this is recommended by the tile adhesive manufacturer
- Marmox Multiboard 600 X 1250 X 10/12.5/20/30/40/50/60mm is fixed to the plywood with a continuous bed of flexible cement-based tile adhesive applied with a 6/8mm trowel.
- Boards are configured in a brick-bond pattern when possible.
- A line of Marmox Multibond along each board edge seals the boards together making a waterproof barrier.
- A 5mm gap is left between the boards and the wall which is filled with Marmox Multibond.
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

Notes: 1) Mechanical fixings are counter-productive because a) they piece the waterproof barrier and b) they reduce the flexibility of the foam core which is there to absorb lateral movement in the subfloor to prevent tile/grout cracking.

Limitations: 1) Compounds containing organic solvents (*including organic based tile sealants*) must not come into contact with Marmox board.

3) Temperatures in excess of 75°C are not appropriate.

Specification: Tile backer board on raised access flooring

Product Ref: Marmox Multiboard

Product Use: Intermediate substrate to ceramic and stone tiling on metal raised access flooring panels.

Manufacturer: Marmox Ltd

Address: Marmox UK Ltd, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP.
01634 835290; Email: info@marmox.co.uk; <http://www.marmox.co.uk/>.

Description: Extruded polystyrene covered on both sides with fibreglass mesh encased in a c.0.75mm layer of polymer modified concrete which permanently bonds the mesh to the polystyrene.

Dimensions: Board Width = 600mm, Board Length = 1250mm, Thickness = 6/10/12.5/20/30/40/50/60mm
(Thinnest board suitable for this application = 6mm)

Properties: Decoupling between the tiled surface and the sub-structure.
Thermal Insulation unaffected by moisture, temperature including freezing.
Waterproofing,
Enhanced tile adhesion

Authorities: BBA Certified (09/4687), ISO9001 (Bureau Veritas), Energy Saving Trust Recommended for insulation.
BS EN 5385-1: Code of practice for the design and installation of internal floor tiling.

CE Marking: EN13164 – T1 – CS(10\Y)400 – CC(2/1/10)115 – WL(T)3

General Advice **The Marmox board is fixed to the RAF panels with tile adhesive only.**
Marmox boards are fixed to the floor using a continuous thin bed of suitable tile adhesive.

- The panels should be primed if this is recommended by the tile adhesive manufacturer
- Marmox Multiboard 600 X 1250 X 6/10/12.5/20/30/40/50/60mm is fixed to the plywood with a continuous bed of flexible cement-based tile adhesive applied with a 6/8mm trowel.
- Boards are configured in a brick-bond pattern when possible.
- A line of Marmox Multibond along each board edge seals the boards together making a waterproof barrier.
- A 5mm gap is left between the boards and the wall which is filled with Marmox Multibond.
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

Notes:

- 1) Consult the adhesive manufacturer of a suitable material suitable for bonding to metal – it will generally be necessary to prime the surface before applying the adhesive using a 6 to 8mm trowel.
- 2) Fix with tile adhesive only, *do not reinforce with screws and washers as this will reduce the decoupling effect of the boards.*
- 3) Any movement joints in the raised flooring system should be incorporated into the Marmox board and the tiling.



Limitations: 1) Compounds containing organic solvents (*including organic based tile sealants*) must not come into contact with Marmox board.

3) Temperatures in excess of 75°C are not appropriate.

Specification for use as tile backer board on perfectly flat brick or concrete internal Walls

- Product Ref:** Marmox Multiboard
- Product Use:** Intermediate substrate to ceramic and stone tiling on internal masonry (*not aircrete*) walls.
- Manufacturer:** Marmox Ltd
Address: Marmox UK Ltd, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP.
01634 835290; Email: info@marmox.co.uk; <http://www.marmox.co.uk/>.
- Description:** Extruded polystyrene covered on both sides with fibreglass mesh encased in a c.0.75mm layer of polymer modified concrete which permanently bonds the mesh to the polystyrene.
- Dimensions:** Board Width = 600mm, Board Length = 1250mm, Thickness = 4/6/10/12.5/20/30/40/50/60mm
(Thinnest board suitable for this application = 4mm)
- Properties:** Decoupling between the tiled surface and the sub-structure.
Thermal Insulation unaffected by moisture, temperature including freezing.
Waterproofing,
Enhanced tile adhesion
- Authorities:** BBA Certified (09/4687), ISO9001 (Bureau Veritas), Energy Saving Trust Recommended for insulation.
BS EN 5385-1: Code of practice for the design and installation of internal ceramic wall tiling.
- CE Marking:** EN13164 – T1 – CS(10\Y)400 – CC(2/1/10)115 – WL(T)3
- General Advice** **The Marmox board is fixed to the masonry either with tile adhesive or fixings**
The masonry wall should be constructed to relevant building standards and not be coated or covered with any surface covering, for example paint, plaster.
If the plastered wall is uneven (>3mm)

A) With a continuous bed of tile adhesive

- Ensure the wall is flat enough for full bed adhesion, *i.e.* <3mm. If it is uneven, the dotting and dabbing plus mechanical reinforcement method should be used instead.
- The masonry should be primed in accordance with the adhesive manufacturer's recommendations.
- Boards can be aligned vertically or horizontally in a staggered (*Brick-bond*) format.
- **Marmox Multiboard 600mm x 1250mm x 4/6/10/12.5/20/30/40/50/60 mm is fixed onto a continuous bed of cement-based tile adhesive (3-5mm thick).**
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

B) Aligned Vertically with screws and Marmox washers

- Ensure the wall is flat enough – if the variation is greater than 3mm, the dotting and dabbing plus mechanical reinforcement method should be used instead.
- **Boards are aligned vertically** in a staggered (*Brick-bond*) format.
- **Marmox Multiboard 600mm x 1250mm x 4/6/10/12.5/20/30/40/50/60 mm is fixed onto the masonry with three vertical rows of three screws and washers (nine per board)**
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

Specification for use as tile backer board on perfectly flat brick or concrete internal Walls

C) Aligned Horizontally with screws and Marmox washers

- Ensure the wall is flat enough – if the variation is greater than 3mm, the dotting and dabbing plus mechanical reinforcement method should be used instead.
- **Boards are aligned horizontally** in a staggered (*Brick-bond*) format.
- **Marmox Multiboard 600mm x 1250mm x 4/6/10/12.5/20/30/40/50/60 mm is fixed onto the masonry with five vertical rows of three screws and washers (15 per board)**
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

Notes (for all 3 applications)

- 1) All connections to building features e.g. window frames, are sealed with Marmox Multibond.
- 2) A 5mm movement gap should be created between the Multiboard and any restraining surface of 5mm which should be filled with Marmox Multibond.
- 4) Applying the tile adhesive in straight lines using a 6/8mm trowel will an even and continuous layer without voids as voids can result in differential curing of the adhesive and increase the risk of interstitial condensation.
- 5) The maximum **hanging weight** of tiling and adhesive is limited only by the properties of the tile adhesive as similar hanging weights to those achieved with bonding tiles to concrete will be obtained by bonding tiles to Marmox. Typically, bonded with a continuous bed of adhesive this would be in excess of 100kg/m².

Limitations:

- 1) Compounds containing organic solvents (*including organic based tile sealants*) must not come into contact with Marmox board.
- 3) Temperatures in excess of 75°C are not appropriate.
- 4) Fixing by the dot and dab method (*using tile adhesive and concrete dowels*) is not allowed for external use as this will create a void behind the boards as indeed would applying a continuous bed of adhesive with a swirling action instead of in straight lines.
- 5) The top edges of large format tiles should not line up with the top edge of the Marmox board but be placed over the joints of two or more Marmox boards.
- 6) The board can compress if point load pressure is applied. A supported square of plywood (*e.g. 5cm x 5cm*) should be fixed into position with tile adhesive replacing the Marmox in the areas where there may be point loading from heavy shelving, hanging lavatories etc.

Specification for use as tile backer board on uneven brick, aircrete or concrete internal Walls

- Product Ref:** Marmox Multiboard, Marmox Dowel Fixings
- Product Use:** Intermediate substrate to ceramic and stone tiling on internal masonry walls (including aircrete).
- Manufacturer:** Marmox Ltd
Address: Marmox UK Ltd, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP.
01634 835290; Email: info@marmox.co.uk; <http://www.marmox.co.uk/>.
- Description:** Extruded polystyrene covered on both sides with fibreglass mesh encased in a c.0.75mm layer of polymer modified concrete which permanently bonds the mesh to the polystyrene.
- Dimensions:** Board Width = 600mm, Board Length = 1250mm, Thickness = 12.5/20/30/40/50/60mm
(Thinnest board suitable for this application = 12.5mm)
- Properties:** Decoupling between the tiled surface and the sub-structure.
Thermal Insulation unaffected by moisture, temperature including freezing.
Waterproofing,
Enhanced tile adhesion
- Authorities:** BBA Certified (09/4687), ISO9001 (Bureau Veritas), Energy Saving Trust Recommended for insulation.
BS EN 5385-1: Code of practice for the design and installation of internal ceramic wall tiling.
- CE Marking:** EN13164 – T1 – CS(10\Y)400 – CC(2/1/10)115 – WL(T)3
- General Advice** **The Marmox board is fixed to the masonry with tile adhesive and fixings**
The masonry wall should be constructed to relevant building standards and not be coated or covered with any surface covering, for example paint, plaster.

- Boards are aligned vertically or horizontally in a staggered (*Brick-bond*) format.
- The dabs of adhesive are (*cement-based*) tile adhesive NOT plasterboard adhesive.
- Marmox Multiboard 600mm x 1250mm x 12.5/20/30/40/50/60 mm is fixed onto five dabs of cement-based tile adhesive (*one in each corner and one in the middle*).
- After curing, Marmox Dowel fixings ^{see note 2} are used to reinforce the adhesion.
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

Notes:

- 1) 10mm diameter holes for the fixing dowels are made in the board before applying the dabs of adhesive to ensure that these are in the correct positions.
- 2) Screws, Marmox washers and wall plugs may be used as an alternative to the Marmox fixing Dowels.
All connections to building features e.g. window frames, are sealed with Marmox Multibond.
- 3) A 5mm movement gap should be created between the Multiboard and any restraining surface of 5mm which should be filled with Marmox Multibond.

Specification for use as tile backer board on uneven brick, aircrete or concrete internal Walls

Limitations:

- 1) Compounds containing organic solvents (*including organic based tile sealants*) must not come into contact with Marmox board.
- 2) Temperatures in excess of 75°C are not appropriate.
- 3) The top edges of large format tiles should not line up with the top edge of the Marmox board but be placed over the joints of two or more Marmox boards.
- 4) The board can compress if point load pressure is applied. A supported square of plywood (*e.g. 5cm x 5cm*) should be fixed into position with tile adhesive directly over one of the dabs replacing the Marmox in the areas where there may be point loading from heavy shelving, hanging lavatories etc.

Specification for use as tile backer board on aircrete block internal Walls

- Product Ref:** Marmox Multiboard
- Product Use:** Intermediate substrate to ceramic and stone tiling on a flat internal aircrete walls.
- Manufacturer:** Marmox Ltd
Address: Marmox UK Ltd, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP.
01634 835290; Email: info@marmox.co.uk; <http://www.marmox.co.uk/>.
- Description:** Extruded polystyrene covered on both sides with fibreglass mesh encased in a c.0.75mm layer of polymer modified concrete which permanently bonds the mesh to the polystyrene.
- Dimensions:** Board Width = 600mm, Board Length = 1250mm, Thickness = 6/10/12.5/20/30/40/50/60mm
(Thinnest board suitable for this application = 4mm)
- Properties:** Decoupling between the tiled surface and the sub-structure.
Thermal Insulation unaffected by moisture, temperature including freezing.
Waterproofing,
Enhanced tile adhesion
- Authorities:** BBA Certified (09/4687), ISO9001 (Bureau Veritas), Energy Saving Trust Recommended for insulation.
BS EN 5385-1: Code of practice for the design and installation of internal ceramic wall tiling.
- CE Marking:** EN13164 – T1 – CS(10\Y)400 – CC(2/1/10)115 – WL(T)3
- General Advice** **The Marmox board is fixed to the masonry either with tile adhesive AND fixings**
The masonry wall should be constructed to relevant building standards and not be coated or covered with any surface covering, for example paint, plaster.

- Ensure the wall is flat enough for full bed adhesion, *i.e.* <3mm. If it is uneven, the dotting and dabbing plus mechanical reinforcement method “IW2-12-60”, should be used instead.
- Boards can be aligned vertically or horizontally in a staggered (*Brick-bond*) format.
- **Marmox Multiboard 600mm x 1250mm x 4/6/10/12.5/20/30/40/50/60 mm is fixed onto a continuous bed of cement-based tile adhesive (3-5mm thick).**
- **After curing, five Marmox Dowel fixings or screws + washers + plugs are used to reinforce the adhesion.**
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

- Notes:**
- 1) 10mm diameter holes for the fixing dowels are made in the board before applying the dabs of adhesive to ensure that these are in the correct positions.
 - 2) All connections to building features e.g. window frames, are sealed with Marmox Multibond.
 - 3) A 5mm movement gap should be created between the Multiboard and any restraining surface of 5mm which should be filled with Marmox Multibond.
 - 4) Applying the tile adhesive in straight lines using a 6/8mm trowel will an even and continuous layer without voids as voids can result in differential curing of the adhesive and increase the risk of interstitial condensation.

Specification for use as tile backer board on aircrete block internal Walls

- Limitations:**
- 1) Compounds containing organic solvents (*including organic based tile sealants*) must not come into contact with Marmox board.
 - 3) Temperatures in excess of 75°C are not appropriate.
 - 4) Fixing by the dot and dab method (*using tile adhesive and concrete dowels*) is not allowed for external use as this will create a void behind the boards as indeed would applying a continuous bed of adhesive with a swirling action instead of in straight lines.
 - 5) The top edges of large format tiles should not line up with the top edge of the Marmox board but be placed over the joints of two or more Marmox boards.
 - 6) The board can compress if point load pressure is applied. A supported square of plywood (*e.g. 5cm x 5cm*) should be fixed into position with tile adhesive replacing the Marmox in the areas where there may be point loading from heavy shelving, hanging lavatories etc.

Specification: Tile backer board on (flat) plastered Walls

- Product Ref:** Marmox Multiboard
- Product Use:** Intermediate substrate to ceramic and stone tiling internal walls with an existing layer of plaster.
- Manufacturer:** Marmox Ltd
Address: Marmox UK Ltd, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP.
01634 835290; Email: info@marmox.co.uk; <http://www.marmox.co.uk/>.
- Description:** Extruded polystyrene covered on both sides with fibreglass mesh encased in a c.0.75mm layer of polymer modified concrete which permanently bonds the mesh to the polystyrene.
- Dimensions:** Width = 600mm, Length = 1250mm, Thickness = 4/6/10mm
(Thinnest board suitable for this application = 4mm)
- Properties:** Decoupling between the tiled surface and the sub-structure.
Thermal Insulation unaffected by moisture, temperature including freezing.
Waterproofing,
Enhanced tile adhesion
- Authorities:** BBA Certified (09/4687), ISO9001 (Bureau Veritas), Energy Saving Trust Recommended for insulation.
BS EN 5385-1: Code of practice for the design and installation of internal ceramic wall tiling.
- CE Marking:** EN13164 – T1 – CS(10\Y)400 – CC(2/1/10)115 – WL(T)3
- General Advice** **The Marmox board is fixed to the plastered wall with tile adhesive AND fixings**
It is preferable, if possible, to remove the plaster so that the boards can be bonded directly to the masonry (*Specification IW1*) and provide a stronger, more durable bond. If not possible, the Marmox board is mechanically fixed to the masonry behind the plaster.
- If the plastered wall is too uneven for direct bonding, Marmox boards can be fixed to timber battens (*Specification IW5*)

- The plastered surface must be sound and flat.
- Boards can be aligned vertically or horizontally in a staggered (*Brick-bond*) format.
- **Marmox Multiboard 600mm x 1250mm x 4/6/10 mm is fixed onto a very thin but even and continuous bed of external grade tile adhesive (2-3mm thick).**
- After curing, boards must also be mechanically fixed with screws and washers every 300mm. Screw holes are sealed using a dab of Marmox Multibond.
- A bead of Multibond is applied to all board edges including a 5mm expansion gap around the perimeter.
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

- Notes:**
- 1) If the plastered wall is uneven, consideration should be removing the render and fitting the boards directly on the masonry
 - 2) Using a frame to fix the boards above a plastered wall is not ideal as that would encourage moisture to concentrate within the plaster.
 - 3) Sealing the boards together with Multibond ensures a continuous waterproof barrier protecting against ingress of water – this is particularly important as the plaster coating needs to be kept dry.

Specification: Tile backer board on (flat) plastered Walls

- 4) All connections to building features e.g. window frames, are sealed with Marmox Multibond.
- 5) A 5mm movement gap should be created between the Multiboard and any restraining surface of 5mm which should be filled with Marmox Multibond.

Limitations:

- 1) Compounds containing organic solvents must not come into contact with Marmox board.
- 2) Temperatures in excess of 75°C are not appropriate.
- 3) Fixing by the dot and dab method (*using tile adhesive and concrete dowels*) is not allowed for this application (*over plaster*) as this will create small voids behind the boards which could result in moisture pockets in the plaster.
- 4) The top edges of large format tiles should not line up with the top edge of the Marmox board but be placed over the joints of two or more Marmox boards.

Specification: Tile backer board direct on timber/stud wall frame with 300mm centres

Product Ref: Marmox Multiboard, Marmox Washers, Marmox Multibond

Product Use: Intermediate substrate to ceramic and stone tiling on internal stud clad walls.

Manufacturer: Marmox Ltd

Address: Marmox UK Ltd, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP.
01634 835290; Email: info@marmox.co.uk; <http://www.marmox.co.uk/>.

Description: Extruded polystyrene covered on both sides with fibreglass mesh encased in a c.0.75mm layer of polymer modified concrete which permanently bonds the mesh to the polystyrene.

Dimensions: Board Width = 600mm, Board Length = 1250mm, Thickness = 10/12.5mm
(Thinnest board suitable for this application = 10mm)

Properties: Decoupling between the tiled surface and the sub-structure.
Thermal Insulation unaffected by moisture, temperature including freezing.
Waterproofing,
Enhanced tile adhesion

Authorities: BBA Certified (09/4687), ISO9001 (Bureau Veritas), Energy Saving Trust Recommended for insulation.
BS EN 5385-1: Code of practice for the design and installation of internal ceramic wall tiling.

CE Marking: EN13164 – T1 – CS(10\Y)400 – CC(2/1/10)115 – WL(T)3

General Advice **The Marmox board is fixed directly to the stud frame**

If the distance between studs is 600mm, 10 and 12.5mm boards cannot be used – thicker boards (at least 20mm) should be used as shown in specification IW5-20-60.

A) Boards aligned vertically

- The stud frame is constructed not to defect after the installation of the Multiboard, additional horizontal noggins may be required to improve the resistance to deflection.
- Studs may be a maximum of 300mm apart.
- Boards should be aligned in a staggered (*Brick-bond*) format (*each board will be fixed to three vertical studs with 5 screws + washers per stud, 15 fixings per board*)
- Marmox Multiboards, 600mm x 1250mm x 10/12.5mm aligned vertically in a staggered format are fixed using corrosion resistant screws + Marmox Washers into the each vertical timber/metal stud.
- A bead of Multibond is applied to all board edges so that it forms a waterproof seal between adjacent boards / walls / ceiling.
- All screw-fixings are sealed with Marmox Multibond.
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

B) Boards aligned horizontally

- The stud frame is constructed not to defect after the installation of the plasterboard, additional horizontal noggins may be required to improve the resistance to deflection.
- 10mm thick boards should be supported on by four studs with both short edges supported, centres should match-up with the board size should be c.310mm apart.
- 12.5mm thick boards should be supported on by three studs with both short edges supported, centres should match-up with the board size should be c.415mm apart.
- Boards should be aligned in a staggered (*Brick-bond*) format and to ensure all short edges are supported. Each board will be fixed to three vertical studs with 3 screws + washers (*9 fixings per 12.5mm board or 12 fixings per 10mm board*)

Specification: Tile backer board direct on timber/stud wall frame with 300mm centres

- Marmox Multiboards, 600mm x 1250mm x 10/12.5mm aligned horizontally in a staggered format are fixed using corrosion resistant screws + Marmox Washers through into the each vertical timber/metal stud.
- A bead of Multibond is applied to all board edges so that it both adheres the edge of the board to the plasterboard and also forms a waterproof seal between adjacent boards / walls / ceiling.
- All screw-fixings are sealed with Marmox Multibond.
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

Notes

- 1) All connections to building features e.g. window frames, are sealed with Marmox Multibond.
- 2) The substrate should be constructed in accordance with BS5385 inasmuch that prior to the installation of Multiboard, the backs and edges of boards subject to movement or warping from changes in moisture content should be treated against the ingress of atmospheric moisture.
- 3) A 5mm movement gap should be created between the Multiboard and any restraining surface of 5mm which should be filled with Marmox Multibond.

Limitations:

- 1) Compounds containing organic solvents (*including organic based tile sealants*) must not come into contact with Marmox board.
- 2) Temperatures in excess of 75°C are not appropriate.

Specification: Tile backer board direct on timber/stud wall frame with 600mm centres

Product Ref: Marmox Multiboard (20/30/40/50/60mm), Marmox Washers, Marmox Multibond

Product Use: Intermediate substrate to ceramic and stone tiling on internal plywood clad walls.

Manufacturer: Marmox Ltd

Address: Marmox UK Ltd, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP.
01634 835290; Email: info@marmox.co.uk; <http://www.marmox.co.uk/>.

Description: Extruded polystyrene covered on both sides with fibreglass mesh encased in a c.0.75mm layer of polymer modified concrete which permanently bonds the mesh to the polystyrene.

Dimensions: Board Width = 600mm, Board Length = 1250mm, Thickness = 20/30/40/50/60mm
(Thinnest board suitable for this application = 20mm)

Properties: Decoupling between the tiled surface and the sub-structure.
Thermal Insulation unaffected by moisture, temperature including freezing.
Waterproofing,
Enhanced tile adhesion

Authorities: BBA Certified (09/4687), ISO9001 (Bureau Veritas), Energy Saving Trust Recommended for insulation.
BS EN 5385-1: Code of practice for the design and installation of internal ceramic wall tiling.

CE Marking: EN13164 – T1 – CS(10\Y)400 – CC(2/1/10)115 – WL(T)3

General Advice **The Marmox board is fixed directly to the stud frame**

If the distance between studs is 300mm, 10 and 12.5mm boards can also be used – see specification IW5-10-12.

A) Boards aligned vertically

- Additional horizontal noggins may be required to improve the resistance to deflection.
- Studs may be a maximum of 600mm apart.
- Boards should be aligned in a staggered (*Brick-bond*) format (*each board will be aligned so that each long edge is supported by a stud. fixed to two vertical studs with 5 screws + washers per stud, 10 fixings per board*)
- Marmox Multiboards, 600mm x 1250mm x 20/30/40/50/60mm aligned vertically in a staggered format are fixed using corrosion resistant screws + Marmox Washers into the each vertical timber/metal stud.
- A bead of Multibond is applied to all board edges so that it forms a waterproof seal between adjacent boards / walls / ceiling.
- All screw-fixings are sealed with Marmox Multibond.
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

B) Boards aligned horizontally

- Additional horizontal noggins may be required to improve the resistance to deflection.
- Boards should be supported on by four studs with both short edges supported, centres should match-up with the board size should be c.625mm apart.
- Boards should be aligned in a staggered (*Brick-bond*) format and to ensure all short edges are supported. Each board will be fixed to three vertical studs with 3 screws + washers (*9 fixings per board*)
- Marmox Multiboards, 600mm x 1250mm x 20/30/40/50/60mm aligned horizontally in a staggered format are fixed using corrosion resistant screws + Marmox Washers through into the each vertical timber/metal stud.
- A bead of Multibond is applied to all board edges so that it forms a waterproof seal between adjacent boards / walls / ceiling.
- All screw-fixings are sealed with Marmox Multibond.
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

Specification: Tile backer board direct on timber/stud wall frame with 600mm centres

Notes

- 1) All connections to building features e.g. window frames, are sealed with Marmox Multibond.
- 2) The substrate should be constructed in accordance with BS5385 inasmuch that prior to the installation of Multiboard, the backs and edges of boards subject to movement or warping from changes in moisture content should be treated against the ingress of atmospheric moisture.
- 3) A 5mm movement gap should be created between the Multiboard and any restraining surface of 5mm which should be filled with Marmox Multibond.

Limitations:

- 1) Compounds containing organic solvents (*including organic based tile sealants*) must not come into contact with Marmox board.
- 2) Temperatures in excess of 75°C are not appropriate.

Specification: Tile backer board on Plywood-clad internal stud Walls **- fixed with adhesive**

Product Ref: Marmox Multiboard (4/6/10/12.5/20/30/40/50/60mm), Marmox Washers, Marmox Multibond

Product Use: Intermediate substrate to ceramic and stone tiling on internal plywood clad walls.

Manufacturer: Marmox Ltd

Address: Marmox UK Ltd, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP.
01634 835290; Email: info@marmox.co.uk; <http://www.marmox.co.uk/>.

Description: Extruded polystyrene covered on both sides with fibreglass mesh encased in a c.0.75mm layer of polymer modified concrete which permanently bonds the mesh to the polystyrene.

Dimensions: Board Width = 600mm, Board Length = 1250mm, Thickness = 4/6/10/12.5/20/30/40/50/60mm
(Thinnest board suitable for this application = 4mm)

Properties: Decoupling between the tiled surface and the sub-structure.
Thermal Insulation unaffected by moisture, temperature including freezing.
Waterproofing,
Enhanced tile adhesion

Authorities: BBA Certified (09/4687), ISO9001 (Bureau Veritas), Energy Saving Trust Recommended for insulation.
BS EN 5385-1: Code of practice for the design and installation of internal ceramic wall tiling.

CE Marking: EN13164 – T1 – CS(10\Y)400 – CC(2/1/10)115 – WL(T)3

General Advice: **The Marmox board is fixed onto 18mm plywood with tile adhesive AND screws and washers**
Cement based tile adhesive is the primary fixing method but to allow for the durability of the timber, additional mechanical fixings into the studs are also recommended.

- The stud frame is constructed not to defect after the installation of the 18mm plywood, additional horizontal noggins may be required to improve the resistance to deflection. This stability must be confirmed.
- Boards can be aligned vertically or horizontally in a staggered (*Brick-bond*) format.
- Studs may be a maximum of 600mm apart.
- A 5mm expansion gap is left between the boards and the wall.
- Marmox Multiboard 600mm x 1250mm x 4/6/10/12.5/20/30/40/50/60 mm is fixed onto a continuous bed of cement-based tile adhesive (3-5mm thick).
- Six Corrosion resistant screws + Marmox Washers (*3 along each long side, at c.600mm centres*) are placed through the plywood into the timber/metal stud.
- A bead of Multibond is into the 5mm expansion gap and all screw-fixings are sealed with Marmox Multibond.
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

- Notes**
- 1) All connections to building features e.g. window frames, are sealed with Marmox Multibond.
 - 2) The substrate should be constructed in accordance with BS5385 inasmuch that prior to the installation of Multiboard, the backs and edges of boards subject to movement or warping from changes in moisture content should be treated against the ingress of atmospheric moisture.
 - 3) A 5mm movement gap should be created between the Multiboard and any restraining surface of 5mm which should be filled with Marmox Multibond.

Specification: Tile backer board on Plywood-clad internal stud Walls
- fixed with adhesive

- Limitations:**
- 1) Compounds containing organic solvents (*including organic based tile sealants*) must not come into contact with Marmox board.
 - 2) Temperatures in excess of 75°C are not appropriate.

Specification: Tile backer board on Plywood-clad internal stud Walls (screw-fix only)

- Product Ref:** Marmox Multiboard (12.5/20/30/40/50/60mm), Marmox Washers, Marmox Multibond
- Product Use:** Intermediate substrate to ceramic and stone tiling on internal plywood clad walls.
- Manufacturer:** Marmox Ltd
Address: Marmox UK Ltd, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP.
01634 835290; Email: info@marmox.co.uk; <http://www.marmox.co.uk/>.
- Description:** Extruded polystyrene covered on both sides with fibreglass mesh encased in a c.0.75mm layer of polymer modified concrete which permanently bonds the mesh to the polystyrene.
- Dimensions:** Board Width = 600mm, Board Length = 1250mm, Thickness = 12.5/20/30/40/50/60mm
(Thinnest board suitable for this application = 12.5mm)
- Properties:** Decoupling between the tiled surface and the sub-structure.
Thermal Insulation unaffected by moisture, temperature including freezing.
Waterproofing,
Enhanced tile adhesion
- Authorities:** BBA Certified (09/4687), ISO9001 (Bureau Veritas), Energy Saving Trust Recommended for insulation.
BS EN 5385-1: Code of practice for the design and installation of internal ceramic wall tiling.
- CE Marking:** EN13164 – T1 – CS(10\Y)400 – CC(2/1/10)115 – WL(T)3
- General Advice:** **The Marmox board is fixed through the 18mm plywood with screws and washers only**
The studs must be aligned so that the long edges of the Marmox boards are supported and can be screw-fixed into the studs.

Boards aligned vertically or horizontally

- The stud frame is constructed not to defect after the installation of the 18mm plywood, additional horizontal noggins may be required to improve the resistance to deflection.
- Studs may be a maximum of 600mm apart.
- Boards should be aligned in a staggered (*Brick-bond*) format (*each board is positioned so that the edges coincide with the studs which are subsequently fixed to with 3 screws + washers per stud: 6 fixings per board*)
- Marmox Multiboards, 600mm x 1250mm x 12.5/20/30/40/50/60 mm aligned in a staggered format are fixed with corrosion resistant screws + Marmox Washers (*supporting the edges*) through the plywood into the each timber/metal stud.
- A bead of Multibond is applied to all board edges so that it forms a waterproof seal between adjacent boards and all screw-fixings are sealed with Marmox Multibond.
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

Notes

- 1) The plywood **MUST** be protected against ingress of water through the board junctions. The Marmox board is waterproof so could trap any moisture under the surface which could swell the plywood and push against the Marmox board and possibly dislodge the tiling. A generous bead of Marmox Multibond (*mastic*) is applied to all board edges during installation and will also act as an adhesive.
- 2) All connections to building features e.g. window frames, are sealed with Marmox Multibond.
- 3) The substrate should be constructed in accordance with BS5385 inasmuch that prior to the installation of Multiboard, the backs and edges of boards subject to movement or warping from changes in moisture content should be treated against the ingress of atmospheric moisture.

Specification: Tile backer board on Plywood-clad internal stud Walls (screw-fix only)

4) The substrate should be constructed in accordance with BS5385 inasmuch that prior to the installation of Multiboard, the backs and edges of boards subject to movement or warping from changes in moisture content should be treated against the ingress of atmospheric moisture.

5) A 5mm movement gap should be created between the Multiboard and any restraining surface of 5mm which should be filled with Marmox Multibond.

Limitations:

1) Compounds containing organic solvents (*including organic based tile sealants*) must not come into contact with Marmox board.

2) Temperatures in excess of 75°C are not appropriate.

Specification: tile backer board on Plasterboard-clad internal stud Walls

- Product Ref:** Marmox Multiboard (10 or 12.5mm), Marmox Washers, Marmox Multibond
- Product Use:** Intermediate substrate to ceramic and stone tiling on internal plasterboard clad walls.
- Manufacturer:** Marmox Ltd
Address: Marmox UK Ltd, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP.
01634 835290; Email: info@marmox.co.uk; <http://www.marmox.co.uk/>.
- Description:** Extruded polystyrene covered on both sides with fibreglass mesh encased in a c.0.75mm layer of polymer modified concrete which permanently bonds the mesh to the polystyrene.
- Dimensions:** Board Width = 600mm, Board Length = 1250mm, Thickness = 10/12.5mm
(Thinnest board suitable for this application = 10mm)
- Properties:** Decoupling between the tiled surface and the sub-structure.
Thermal Insulation unaffected by moisture, temperature including freezing.
Waterproofing,
Enhanced tile adhesion
- Authorities:** BBA Certified (09/4687), ISO9001 (Bureau Veritas), Energy Saving Trust Recommended for insulation.
BS EN 5385-1: Code of practice for the design and installation of internal ceramic wall tiling.
- CE Marking:** EN13164 – T1 – CS(10\Y)400 – CC(2/1/10)115 – WL(T)3
- General Advice** **The Marmox board is fixed to the studs through the plasterboard with screws and washers.**
10 and 12.5mm board can be used if the studs underneath the plasterboard are no more than 400mm apart. If the studs are at 600mm centres, Specification “IW7-20-60” should be used.

A) Boards aligned vertically

- The stud frame is constructed not to defect after the installation of the plasterboard, additional horizontal noggins may be required to improve the resistance to deflection.
- Studs may be a maximum of 300mm apart.
- Boards should be aligned in a staggered (*Brick-bond*) format (*each board will be fixed to three vertical studs with 5 screws + washers per stud, 15 fixings per board*)
- Marmox Multiboards, 600mm x 1250mm x 10/12.5 mm aligned vertically in a staggered format are fixed using corrosion resistant screws + Marmox Washers through the plasterboard into the each vertical timber/metal stud.
- A bead of Multibond is applied to all board edges so that it both adheres the edge of the board to the plasterboard and also forms a waterproof seal between adjacent boards / walls / ceiling.
- All screw-fixings are sealed with Marmox Multibond.
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

B) Boards aligned horizontally

- The stud frame is constructed not to defect after the installation of the plasterboard, additional horizontal noggins may be required to improve the resistance to deflection.
- Boards should be supported on by four studs with both short edges supported, centres should match-up with the board size should be c.400mm apart.
- Boards should be aligned in a staggered (*Brick-bond*) format and to ensure all short edges are supported (*each board will be fixed to four vertical studs with 3 screws + washers, 12 fixings per board*)
- Marmox Multiboards, 600mm x 1250mm x 10/12.5mm aligned horizontally in a staggered format are fixed using corrosion resistant screws + Marmox Washers through the plasterboard into the each vertical timber/metal stud.
- A bead of Multibond is applied to all board edges so that it both adheres the edge of the board to the plasterboard and also forms a waterproof seal between adjacent boards / walls / ceiling.

Specification: tile backer board on Plasterboard-clad internal stud Walls

- All screw-fixings are sealed with Marmox Multibond (*which is preferable to using the WP Tape*)
- Scrim tape ("*Marmox Reinforcing Tape*") should be placed over all board joints prior to tiling with adhesive.

Notes

- 1) The plasterboard **MUST** be protected against ingress of water through the board junctions. The Marmox board is waterproof so could trap any moisture under the surface which could swell the plasterboard and push against the Marmox board and possibly dislodge the tiling. A generous bead of Marmox Multibond (*mastic*) is applied to all board edges during installation and will also act as an adhesive.
- 2) All connections to building features e.g. window frames, are sealed with Marmox Multibond.
- 3) The substrate should be constructed in accordance with BS5385 inasmuch that prior to the installation of Multiboard, the backs and edges of boards subject to movement or warping from changes in moisture content should be treated against the ingress of atmospheric moisture.
- 4) A 5mm movement gap should be created between the Multiboard and any restraining surface of 5mm which should be filled with Marmox Multibond.

Limitations:

- 1) Compounds containing organic solvents (*including organic based tile sealants*) must not come into contact with Marmox board.
- 2) Temperatures in excess of 75°C are not appropriate.

Specification: Tile backer board (20mm and thicker) on Plasterboard-clad internal stud Walls

Product Ref: Marmox Multiboard (12.5/20/30/40/50/60mm), Marmox Washers, Marmox Multibond

Product Use: Intermediate substrate to ceramic and stone tiling on internal plywood clad walls.

Manufacturer: Marmox Ltd

Address: Marmox UK Ltd, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP.
01634 835290; Email: info@marmox.co.uk; <http://www.marmox.co.uk/>.

Description: Extruded polystyrene covered on both sides with fibreglass mesh encased in a c.0.75mm layer of polymer modified concrete which permanently bonds the mesh to the polystyrene.

Dimensions: Board Width = 600mm, Board Length = 1250mm, Thickness = 20/30/40/50/60mm
(Thinnest board suitable for this application = 20mm)

Properties: Decoupling between the tiled surface and the sub-structure.
Thermal Insulation unaffected by moisture, temperature including freezing.
Waterproofing,
Enhanced tile adhesion

Authorities: BBA Certified (09/4687), ISO9001 (Bureau Veritas), Energy Saving Trust Recommended for insulation.
BS EN 5385-1: Code of practice for the design and installation of internal ceramic wall tiling.

CE Marking: EN13164 – T1 – CS(10\Y)400 – CC(2/1/10)115 – WL(T)3

General Advice **The Marmox board is fixed to the studs through the plasterboard with screws and washers.**
10 and 12.5mm board can be used if the studs underneath the plasterboard are 600mm apart. If the studs are at 300mm or 400 centres, thinner boards (10mm and 12.5mm) can be used as shown in “specification IW7-10-12”.

A) Boards aligned vertically

- The stud frame is constructed not to defect after the installation of the plasterboard, additional horizontal noggins may be required to improve the resistance to deflection.
- Studs may be a maximum of 600mm apart.
- Boards should be aligned in a staggered (*Brick-bond*) format (*each board will be fixed to two vertical studs with 5 screws + washers per stud, 10 fixings per board*)
- Marmox Multiboards, 600mm x 1250mm x 20/30/40/50/60 mm aligned vertically in a staggered format are fixed using corrosion resistant screws + Marmox Washers through the plasterboard into the each vertical timber/metal stud.
- A bead of Multibond is applied to all board edges so that it both adheres the edge of the board to the plasterboard and also forms a waterproof seal between adjacent boards / walls / ceiling.
- All screw-fixings are sealed with Marmox Multibond.
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

B) Boards aligned horizontally

- The stud frame is constructed not to defect after the installation of the plasterboard, additional horizontal noggins may be required to improve the resistance to deflection.
- Boards should be supported on by three studs with both short edges supported, centres should match-up with the board size should be c.600mm apart.
- Boards should be aligned in a staggered (*Brick-bond*) format and to ensure all short edges are supported (*each board will be fixed to three vertical studs with 3 screws + washers, 9 fixings per board*)

Specification: Tile backer board (20mm and thicker) on Plasterboard-clad internal stud Walls

- Marmox Multiboards, 600mm x 1250mm x 20/30/40/50/60mm aligned horizontally in a staggered format are fixed using corrosion resistant screws + Marmox Washers through the plasterboard into the each vertical timber/metal stud.
- A bead of Multibond is applied to all board edges so that it both adheres the edge of the board to the plasterboard and also forms a waterproof seal between adjacent boards / walls / ceiling.
- All screw-fixings are sealed with Marmox Multibond.
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

Notes

- 1) The plasterboard **MUST** be protected against ingress of water through the board junctions. The Marmox board is waterproof so could trap any moisture under the surface which could swell the plasterboard and push against the Marmox board and possibly dislodge the tiling. A generous bead of Marmox Multibond (*mastic*) is applied to all board edges during installation and will also act as an adhesive.
- 2) All connections to building features e.g. window frames, are sealed with Marmox Multibond.
- 3) The substrate should be constructed in accordance with BS5385 inasmuch that prior to the installation of Multiboard, the backs and edges of boards subject to movement or warping from changes in moisture content should be treated against the ingress of atmospheric moisture.
- 4) A 5mm movement gap should be created between the Multiboard and any restraining surface of 5mm which should be filled with Marmox Multibond.

Limitations:

- 1) Compounds containing organic solvents (*including organic based tile sealants*) must not come into contact with Marmox board.
- 2) Temperatures in excess of 75°C are not appropriate.

Specification for use a tile backer board providing decoupling, impact sound insulation, thermal insulation and a waterproof barrier to a tiled floor.

Product Ref: Marmox SoundBoard

Product Use: Waterproof intermediate substrate to ceramic and stone tiling on internal flooring decoupling the sub-floor from the tiled surface in addition to providing thermal insulation and impact noise insulation. Typically used in shared accommodation buildings where a tiled floor would otherwise result in noise levels being heard in the rooms below out of specification with Part E / Section 5 of the building regulations (*England & Wales / Scotland*).
Can be used on concrete or timber floors

Manufacturer: Marmox Ltd

Address: Marmox UK Ltd, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP.
01634 835290; Email: info@marmox.co.uk; <http://www.marmox.co.uk/>.

Description: Extruded polystyrene coated on one sides with fibreglass mesh encased in a c.0.75mm layer of polymer modified concrete and on the other side, a 2mm thick layer of SBR rubber

Dimensions: Width = 600mm, Length = 1250mm, Thickness = 8mm / 12mm

Properties: Impact Sound Insulation on a tiled surface (ΔL_w) = 20dB.
Resistant to external environment and temperatures.
Low thermal conductivity ($\lambda = 0.034\text{W/mK}$) unaffected by moisture.
Does not expand or contract as temperature and humidity alters.
Absorbs lateral movement in the sub-floor reducing the risk of cracking at the tiled surface.
Completely impermeable to water.

Authorities: HBRC (*sound reduction*), BBA (*BBA certified tile backer board component*), QMS: ISO9001.

CE Marking: No corresponding European Standard.

General Advice Marmox SoundBoard is fixed using tile adhesive to the timber/concrete floor with the rubber side down with tiling on its upper surface. Flexible tile adhesive or Multibond can be used on any substrate.

Method 1, Fixing with Tile Adhesive

- The floor should be level, secure, clean and primed.
- Marmox SoundBoard is fixed (*rubber side down*) to the concrete floor on a continuous bed of flexible cement-based tile adhesive applied with a 6/8mm trowel.
- Boards are configured in a brick-bond pattern when possible.
- A 5mm gap is left between the boards and the wall which is filled with Marmox Multibond.
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

Method 2, Fixing with Marmox Multibond

- The floor should be level, secure, clean and primed.
- A bead of Marmox Multibond applied to the rubber side of the SoundBoard around the board's perimeter and zig-zagged through the middle. One tube should be used for every two boards.
- Marmox SoundBoard is fixed (*rubber side down*) to the concrete floor and not disturbed for 24 hours.
- Boards are configured in a brick-bond pattern when possible.
- A 5mm gap is left between the boards and the wall which is filled with Marmox Multibond.
- Scrim tape (*reinforcing tape*) should be placed over all board joints prior to tiling with adhesive.

Additional Applications

Using as a Perimeter Flanking Board

Marmox SoundBoard can be cut into strips and used as Flanking Boards at the base of the walls at tile level. This provides a rigid physical barrier which the tiles can be butted up to which is acoustically isolated from the masonry of the wall.

- The SoundBoard is cut into appropriate width strips.
- It is fixed to the base of the wall (*with the rubber side facing inwards.*) so that the base of the tiles / timber flooring / grout can butt up to it without it showing.
- It is adhered to the wall with Multibond. *However, Multibond is not an instant grab adhesive so if the wall is uneven or difficult to adhere to, a non-solvent based grab adhesive may be substituted.*
- Ensure there is still a c.5mm expansion gap between the edge of the boards on the floor and the flanking strips which is filled with Multibond.

With electric Under-tile Heating: -

- Ensure boards are secured to sub-floor as above.
- Ensure all board joints are taped.
- Fix the underfloor heating elements directly onto the concrete surface of the Multiboard using the appropriate fixings.
- Cover with a layer of self-levelling compound to just cover the wires.

Limitations:

- 1) Marmox SoundBoard is designed for **FLOORS ONLY**, it reduces impact sound so would be ineffective on walls.
- 2) Not suitable for mechanical fixing (*screws will reduce acoustic properties*).
- 3) Compounds containing organic solvents (*including solvent-based tile sealers*) must not be used.
- 4) Temperatures in excess of 75°C are not appropriate.
- 5) The board can compress if point load pressure is applied therefore tiles no smaller than 5cm x 5cm should not be used on the floor.
- 6) Should not be installed upon fresh concrete / screed as the waterproof nature of the board will limit evaporation.
- 7) If the floor includes expansion joints, Marmox boards must not be fitted over them.