

Specification: Tiling wooden flooring

This document contains three related specifications / applications for using Marmox Multiboard as a tile backer board on wooden floors. Whether it is plywood sheet flooring, OSB or traditional wooden floorboards will determine which method is used

- Floor 2 = applying the Marmox board to plywood sheets
- Floor 3 = applying the Marmox board to OSB or chipboard
- Floor 4 = applying the Marmox board to OSB or chipboard

Specification: Tile backer board on a Plywood sheet flooring

Product Ref: Marmox Multiboard / Marmox SoundBoard / Marmox Sloping Board

Product Use: Intermediate substrate to ceramic and stone tiling on a wooden floor.

Manufacturer: Marmox Ltd

Address: Marmox UK Ltd, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP.
01634 835290; Email: sales@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.
(Soundboard has an additional 2mm layer of SBR rubber on one face)

Dimensions	Multiboard: Width = 600mm, Length = 1200mm, Thickness = 4/6/10/12.5/20/30/40/50/60mm Soundboard: Width = 600mm, Length = 1200mm, Thickness = 8/12mm Sloping Board: Width = 120mm, Length = 1200mm, Thickness = 33 sloping down to 10mm
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Properties: Resistant to external environment and temperatures.
Low thermal conductivity (0.034W/mK) unaffected by moisture.
Does not expand or contract as temperature and humidity alters.
Absorbs lateral movement in the sub-floor to reduce the risk of cracking in the tiled surface.
Completely impermeable to water.
SoundBoard only: Impact Sound Insulation through a ceramic tiled surface (ΔL_w) = 20dB

Fixing Method 1 – using adhesive only

Marmox Multiboard / Soundboard is adhered to the plywood with a thin bed (2-3mm) of flexible tile adhesive. No mechanical fixings are used.

Fixing Method 2 – using mechanical fixings only (not recommended for SoundBoard)

Marmox Multiboard is mechanically fixed to the plywood using screws and Marmox washers. No tile adhesive is necessary.

Method 1) USING TILE ADHESIVE ONLY

- Boards are configured in a brick-bond pattern when possible.
- Apply a continuous bed of cement-based 'flexible grade' (a.k.a. 'C2 grade') tile adhesive to the plywood floor using a 6-4mm notched trowel. Lay and evenly push the Marmox board into position and check the flatness. *If using SoundBoard, lay the rubber side down to the floor.*
- Except in wet or potentially damp areas, gently butt subsequent Marmox boards next to each other so they are just touching. *To create a waterproof barrier, leave a small gap of c.2-3mm between boards and fill with Marmox MSP-360. Marmox self-adhesive Waterproof Tape can also be used to tank joints in very wet areas.*
- A 5-10mm gap is left between the boards and the wall which is also filled with Marmox MSP-360.
- Reinforcing tape (scrim tape) is applied over the joints just prior to tiling except in extreme wet areas (e.g. where there is likely to be standing water) where Marmox self-adhesive Waterproof Tape should be used instead.
- Tiles should now be fixed to the boards with a flexible grade cement-based tile adhesive – no priming is required.

Specification: Tile backer board on a Plywood sheet flooring

ADDITIONAL MECHANICAL FIXING

Unless the timber floor is of very poor quality unlikely to provide a good key for the adhesive, it is not necessary to also use mechanical fixings. Mechanical fixings can be used with SoundBoard but they will create sound bridges so reduce the acoustic insulation property of that product.

Screws and washers can be used with Multiboard although they are counter-productive because: -

- *they pierce the waterproof barrier*
- *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, for example if the quality or integrity of the concrete floor is questionable, in addition to the adhesive, typically five fixings (*screws and washers*) per board are used - *one in each corner and one in the middle*.

Method 2) USING MECHANICAL FIXINGS ONLY (*not recommended for SoundBoard*)

- Boards are configured in a brick-bond pattern when possible.
- Ensure the screw is embedded into the concrete by at least 20mm
- Fix with a row of four screws and washers down each long side (*about 1 to 2cm from the board edges*) and a row of four down the middle three rows of four = **12 fixings per board**,
- A 5-10mm expansion gap should be left where the boards meet the wall which is subsequently filled with MSP-360
- Except in wet or potentially damp areas, gently butt subsequent Marmox boards next to each other so they are just touching. *To create a waterproof barrier, leave a small gap of c.2-3mm between boards and fill with Marmox MSP-360. Marmox self-adhesive Waterproof Tape can also be used to tank joints in very wet areas.*
- Reinforcing tape (*scrim tape*) is applied over the joints just prior to tiling.
- Tiles should now be fixed to the boards with a flexible grade cement-based tile adhesive – no priming is needed.

Authorities: BBA Certified (09/4687), ISO9001

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

Notes

Short boards are much easier to fix to floor than long boards (0.6 x 2.4m) or big boards (1.2 x 2.4m) but those dimensions are also approved for this application (*longer boards are not manufactured in thicknesses less than 10mm*)

Additional Information for Sloping Board

To extend the slope of a 1200 x 1200 board from the 33mm thick edge, a layer of 20mm Marmox Multiboard is first fixed to the floor. An additional sloping board is then fixed to that with a continuous layer of tile adhesive (c.3mm). *The 10mm thick leading edge + 3mm of adhesive + 20mm Marmox board = 33mm – the same thickness as the 'thick edge.'*

Limitations:

- Compounds containing organic solvents (*including solvent-based tile sealers*) must not be used.
- Temperatures in excess of 75°C are not appropriate.
- Tiles no smaller than 5cm x 5cm should be used on the floor.
- If the floor includes expansion joints, Multiboards must not be fitted over them.

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

Product Ref: Marmox Multiboard / Marmox Sloping Board

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

Manufacturer: Marmox Ltd

Address: Marmox UK Ltd, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP.
01634 835290; Email: sales@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.
(Soundboard has an additional 2mm layer of SBR rubber on one face)

Dimensions	Multiboard: Width = 600mm, Length = 1200mm, Thickness = 4/6/10/12.5/20/30/40/50/60mm Soundboard: Width = 600mm, Length = 1200mm, Thickness = 8/12mm Sloping Board: Width = 120mm, Length = 1200mm, Thickness = 33 sloping down to 10mm
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Properties: Resistant to external environment and temperatures.
Low thermal conductivity (0.034W/mK) unaffected by moisture.
Does not expand or contract as temperature and humidity alters.
Absorbs lateral movement in the sub-floor to reduce the risk of cracking in the paved/tiled surface.
Completely impermeable to water.

Authorities: ISO9001 (Bureau Veritas), Energy Saving Trust Recommended for insulation.

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

Fixing Method: Marmox Multiboard / Sloping Board is fixed to this type of floor USING BOTH a continuous bed (3-5mm) of flexible cement-based tile adhesive and also screws and washers.

- Boards are configured in a brick-bond pattern when possible.
- Apply a continuous bed of cement-based 'flexible grade' (a.k.a. 'C2 grade') tile adhesive to the timber floor using a 6-4mm notched trowel.
- Except in wet or potentially damp areas, gently butt subsequent Marmox boards next to each other so they are just touching. *To create a waterproof barrier, leave a small gap of c.2-3mm between boards and fill with Marmox MSP-360. Marmox self-adhesive Waterproof Tape can also be used to tank joints in very wet areas.*
- When the adhesive has cured, add **five screws** and Marmox washers per board (*one in each corner one in the middle*).
- A 5 - 10mm gap is left between the boards and the wall which is also filled with Marmox MSP-360.
- Reinforcing tape (scrim tape) is applied over the joints just prior to tiling except in extreme wet areas (*e.g. where there is likely to be standing water*) where Marmox self-adhesive Waterproof Tape should be used instead.

Limitations:

- Compounds containing organic solvents (*including solvent-based tile sealers*) must not be used.
- Temperatures in excess of 75°C are not appropriate.
- Tiles no smaller than 5cm x 5cm should be used on the floor.
- This method, with mechanical fixing is not suitable SoundBoard therefore SoundBoard is not ideally suited to being laid on a chipboard/OSB substrate.

Specification: Tile backer board on traditional floorboards

Product Ref:	Marmox Multiboard / Marmox SoundBoard / Marmox Sloping Board
Product Use:	Intermediate substrate to ceramic and stone tiling on traditional long timber floorboards.
Manufacturer:	Marmox Ltd
Address:	Marmox UK Ltd, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP. 01634 835290; Email: sales@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. (Soundboard has an additional 2mm layer of SBR rubber on one face)

Dimensions	Multiboard: Width = 600mm, Length = 1200mm, Thickness = 4/6/10/12.5/20/30/40/50/60mm Soundboard: Width = 600mm, Length = 1200mm, Thickness = 8/12mm Sloping Board: Width = 120mm, Length = 1200mm, Thickness = 33 sloping down to 10mm
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Properties:	Resistant to external environment and temperatures. Low thermal conductivity (0.034W/mK) unaffected by moisture. Does not expand or contract as temperature and humidity alters. Absorbs lateral movement in the sub-floor to reduce the risk of cracking in the tiled surface. Completely impermeable to water. SoundBoard only: Impact Sound Insulation through a ceramic tiled surface (ΔL_w) = 20dB
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Authorities:	ISO9001 (Bureau Veritas), Energy Saving Trust Recommended for insulation.
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CE+UK Marking: EN13164 – T1 – CS(10\Y)400 – CC(2/1/10)115 – WL(T)3

Fixing Method:	Marmox Multiboard / SoundBoard / Sloping Board is fixed to the floorboards with continuous layer of tile adhesive <i>only</i> – mechanical fixings must not be used. This method is only appropriate when the floorboards are flat and stable. If a flat and stable surface cannot be guaranteed, an intermediate layer of plywood is required.
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- The floorboards **must not flex or exhibit any vertical movement**. Any movement must be eliminated before fixing the Marmox boards.
- Boards are configured in a brick-bond pattern when possible.
- Marmox boards are fixed to the floorboards on a continuous bed of flexible cement-based tile adhesive applied with an 8/6mm notched trowel. If the floor is particularly uneven, a 20mm trowel may be used.
- Lay and evenly push the Marmox board into position and check the flatness. *If using SoundBoard, lay the rubber side down to the floor.*
- Except in wet or potentially damp areas, gently butt subsequent Marmox boards next to each other so they are just touching. *To create a waterproof barrier, leave a small gap of c.2-3mm between boards and fill with Marmox MSP-360. Marmox self-adhesive Waterproof Tape can also be used to tank joints in very wet areas.*
- A 5-10mm gap is left between the boards and the wall which is also filled with Marmox MSP-360.
- Reinforcing tape (scrim tape) is applied over the joints just prior to tiling except in extreme wet areas (e.g. where there is likely to be standing water) where Marmox self-adhesive Waterproof Tape should be used instead.

Specification: Tile backer board on traditional floorboards

Notes

Short boards are much easier to fix to floor than long boards (0.6 x 2.4m) or big boards (1.2 x 2.4m) but those dimensions are also approved for this application (longer boards are not manufactured in thicknesses less than 10mm)

Additional Information for Sloping Board

To extend the slope of a 1200 x 1200 board from the 33mm thick edge, a layer of 20mm Marmox Multiboard is first fixed to the floor. An additional sloping board is then fixed to that with a continuous layer of tile adhesive (c.3mm). *The 10mm thick leading edge + 3mm of adhesive + 20mm Marmox board = 33mm – the same thickness as the ‘thick edge.’*

Limitations:

1. Compounds containing organic solvents (*including solvent-based tile sealers*) must not be used.
2. Temperatures in excess of 75°C are not appropriate.
3. Tiles no smaller than 5cm x 5cm should be used on the floor.
4. If the floor includes expansion joints, Multiboards or SoundBoards must not be fitted over them.