Specification: Tile backer board on a concrete floor

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

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: 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 = 1200mm, Length = 1200mm, Thickness = 33 sloping down to 10mm

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*

Authorities: BBA Certified (*09/4687*), ISO9001.

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

Recommended Method	Marmox Multiboard / SoundBoard / Sloping Board is fixed to the concrete floor on a continuous bed (*3-5mm*) of flexible cement-based tile adhesive

Alternative Method	Marmox Multiboard (*NOT SoundBoard*) is fixed to the concrete floor with mechanical fixings

- 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 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.*
- A 5mm 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 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.

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ADDITIONAL MECHANICAL FIXING

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.

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*.

Alternative Method with Screws and Washers instead of tile adhesive

- 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 5mm 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 required.

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^{O}C are not appropriate.
3) Tiles no smaller than 5cm x 5cm should be used on the floor.
4) Should not be installed upon fresh concrete / screed as the waterproof nature of the board will limit evaporation.