

Specification to eliminate or reduce thermal bridge at the junction of a masonry wall with a floor

Product ref:	Marmox Thermoblock (Standard Type)
Manufacturer:	Marmox Ltd
Address:	Marmox UK, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP.

Description: Marmox Thermoblock is a load-bearing heat-insulating building block. It is positioned at the foot of a load-bearing or non-load bearing walls to eliminate/reduce the cold bridge. Marmox Thermoblock consists of two rows of load-carrying epoxy-concrete columns of low thermal conductivity bonded to the block's top and bottom fibre-reinforced polymer concrete surfaces. Thermally insulating Extruded Polystyrene surrounds the columns.

Dimensions: Length = 600mm, Thickness = 65mm (100mm upon request),
Width = 100mm, 140mm or 215mm

Product Use: Elimination/Reduction of cold bridge at the floor/wall junction enabling a low ψ value to be used in the SAP or SBAM or DEAP energy loss calculation

Specifications: Cavity wall (base of inner leaf / base of outer leaf) or Solid wall

A single course of Marmox Thermoblock, 600mm(l) x 100mm/140mm/215mm(w) x 65mm(ht) is the starter course for the wall in place of the bottom row of blocks/bricks. Block is fixed to the floor with normal mortar which is also used to lay subsequent courses of bricks/blocks on top. Thermoblock edges are sealed together with a small ribbon of Marmox Multibond on the stepped edges to provide a waterproof barrier.

Properties: Average λ value of 0.047W/mK (to EN13164/EN13167), Mean compressive strength of 9.0N/mm² (to EN772-1), fire resistance >120minutes (to EN1365-1) Water Absorption <3.5% (to EN771-4).

Authorities: BRE – ψ values provided by BRE on their Certified Thermal Products Scheme:
www.bre.co.uk/certifiedthermalproducts
BBA certified (10/4778),
ISO9001 (Bureau Veritas)

Fixing system: Fix to the concrete floor or foundation blocks using a standard brick/block laying sand and cement mortar.

Fix to the bricks/blocks above using a standard brick/block laying sand and cement mortar. If using lightweight blocks, this initial layer of mortar should be at least 15mm.

A waterproof barrier can be created by sealing the edges with a sealant. Fixed to each other using Marmox Multibond along the joint.

- **Application:** 1 tube for every 10metres of 100mm wide blocks (c.18 blocks)
1 tube for every 8 metres of 140mm wide blocks (c.12 blocks)
1 tube for every 6 metres of 215mm wide blocks (c.10 blocks)

Treatment: The vertical sides of the Marmox Thermoblock must not be left visible. For typical installation, the exposed face must be covered with the floor screed. If installed in other areas, this vertical surface must be covered, for example by plaster.
If used on an external wall, the surfaces should be protected from sunlight, impact, insects by covering with a simple render or protective paint.

DPM: Although when sealed together Thermoblock creates a permanent waterproof barrier, Thermoblock is not officially a DPM. The Damp Proof Membrane must be applied to the wall design as though the Thermoblock were simply another normal block in the wall. Typically, the DPM is fixed above the layer of Thermoblock, either directly on top or on top of the next block above it.

Limitations:

- 1) The Thermoblock must not be narrower than what is laid on top of it. (*i.e. 100mm bricks cannot be laid on top of 140mm wide Thermoblocks*)
- 2) Thermoblocks cannot be laid on top of each other.
- 3) Temperatures in excess of 80°C are not appropriate (*for temperatures above 80°C, use the PIR version*)
- 4) Effectively creates a waterproof barrier but not classified as a WPC
- 5) Must not be used in environments where organic solvents such as petrol may come into contact with them.
- 6) Must not be used with any adhesives, sealants, waterproofing treatments that contain organic solvents. The compatibility of ANY none standard material should be determined by checking whether that material is compatible with polystyrene – if it is not, then it cannot be used with Thermoblock.
- 7) Should not be used when there would be potential contact with flame applied bitumen membranes (*for these applications use the PIR version*)

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