

**Specification to eliminate or reduce thermal bridge at the junction of a masonry cavity wall with a beam + block floor  
 INSULATION BELOW SCREED**

**Specification:** MW3 (*Masonry Wall #3*)  
**Product ref:** Marmox Thermoblock (Standard Type)  
**Junction Type:** E5  
**Manufacturer:** Marmox UK, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP.  
 01634 835290; Email: [sales@marmox.co.uk](mailto:sales@marmox.co.uk); <http://www.marmox.co.uk/>.

**Product Use:** Elimination or reduction in cold bridging at the wall to floor junction.  
 Reduction in the  $\psi$  value used in SAP/SBEM or DEAP/NEAP calculations to enable compliance with UK / Irish building regulations.

**Description:** Marmox Thermoblock is a load-bearing heat-insulating building block consisting of two rows of load-carrying epoxy-concrete columns of low thermal conductivity bonded to polymer concrete layers reinforced with fibreglass mesh which comprise the upper and lower surfaces. Thermally insulating Extruded Polystyrene surrounds the columns.

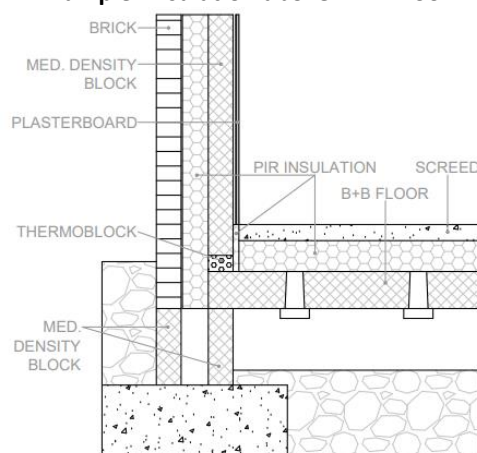
**Properties:** Average  $\lambda$  value of 0.05W/mK (to EN13164/EN13167)  
 Mean compressive strength of 9.0N/mm<sup>2</sup> (to EN772-1)  
 Fire resistance >120minutes (to EN1365-1)  
 Water Absorption <3.5% (to EN771-4).

**Dimensions:** Length = 600mm, Thickness = 65mm or 100mm, Width = 100mm, 140mm or 215mm

**Specification with a beam + block floor**

A course of Thermoblock replaces the first course of concrete / AAC blocks directly on the B+B floor.

**Example: Insulation above B + B floor**



Variations to the above examples can be used – for example a course of Thermoblock can be used on top of the foundation blocks directly supporting the b+b floor.

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- A single course of Marmox Thermoblock: 600mm(l) x 100/140/215mm(w) x 65/100mm(ht) is mortared onto the infill b+b block that is built into the wall (it is replacing the first course of blocks of the inner leaf)
- Thermoblock is fixed to the floor with normal bricklayers' mortar.
- The length of Thermoblocks can be cut using a brick saw.
- At corners where a 90 degree angle is required, a flat short edge can be achieved either by cutting the block with a brick saw or cutting off the overlap which can be done using a hand saw
- Thermoblock edges are sealed together with a ribbon of Marmox MSP360 on the stepped edges to provide a waterproof barrier and improve air-tightness.
- *Thermoblock is waterproof so can therefore be used either above or below the DPC.*

**Authorities:** BBA certified (10/4778)  
ISO9001 (Bureau Veritas)  
BRE – Certified Thermal Products Scheme, <http://www.bre.co.uk/certifiedthermalproducts/>  
Fire Safety Report: 16781B (Warrington Fire)

**Please note:**

- Thermoblocks should be fully supported and not span voids.
- Thermoblocks must not overhang what they are fixed onto – they must not be wider than the base they are mortared on to.
- The blocks mortared on top of the Thermoblocks cannot be narrower. They should be approximately the same width or slightly wider.
- If using lightweight blocks, this initial layer of mortar on top of the Thermoblock layer should be at least 15mm.
- If necessary, two or even three Thermoblocks can be laid side by side to create a wide base.
- **Thermoblocks cannot be stacked** – only one single layer is permitted

**Waterproofing:** *Although when sealed together Thermoblock creates a permanent waterproof barrier, Thermoblock is not officially a DPM.* A separate Damp Proof Membrane should therefore be included in the detail. The DPM can be fixed directly above or below the Thermoblock but because Thermoblock is waterproof, typically it is fixed above the Thermoblock layer. A permanent waterproof barrier is created by sealing the block edges to each other with a sealant: Marmox MSP360, supplied in **300ml tubes**: -

Marmox Thermoblock 100mm wide require 1 cartridge per 36 blocks  
Marmox Thermoblock 140mm wide require 1 cartridge per 24 blocks  
Marmox Thermoblock 215mm wide require 1 cartridge per 20 blocks