

Specification to eliminate or reduce thermal bridge at the junction of a masonry cavity wall with a suspended floor
INSULATION BELOW SLAB

Specification: MW2 (*Masonry Wall #2*)
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; <http://www.marmox.co.uk/>.

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

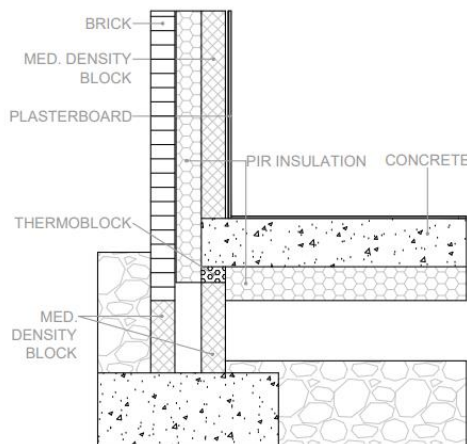
Description: Marmox Thermoblock is a load-bearing heat-insulating building block consisting of two rows of load-carrying epoxy-concrete columns of low thermal conductivity bonded to polymer concrete layers reinforced with fibreglass mesh which comprise the upper and lower surfaces. Thermally insulating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

Properties: Average λ value of 0.05W/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*).

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

Specification with a suspended slab with insulation below
 A course of Thermoblock sits on top of the foundation blocks supporting the slab ideally connecting the floor and cavity insulation.

Example: Insulation under suspended slab



Variations to the above examples can be used – ideally, the Thermoblock should be in a position where it connects the floor to the wall insulation when possible

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- A single course of Marmox Thermoblock: 600mm(l) x 100/140/215mm(w) x 65/100mm(ht) is used to replace the top foundation block immediately below the suspended slab.
- Thermoblock is fixed to the blocks 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.
- Ideally, the insulation in the cavity should extend down to the level of the Thermoblock to create continuous insulation.
- Normal mortar is used to secure the floor onto top of the Thermoblock.

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