

Specification to eliminate or reduce thermal bridge at the junction of a steel frame wall with a suspended OR ground bearing slab
INSULATION BELOW SLAB

Specification: SFW1 (Steel Frame Wall #1)
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/>.

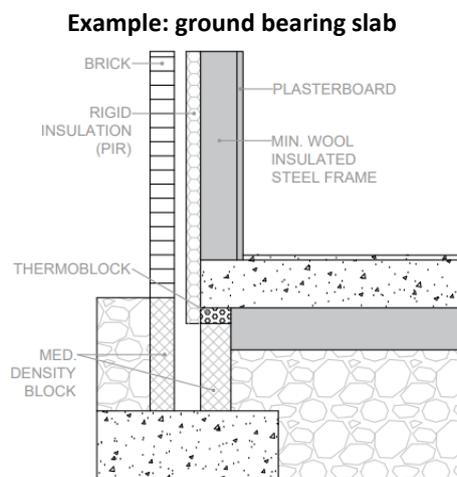
Product Use: Elimination or reduction in cold bridging where the base of a steel frame wall is attached to a suspended concrete floor slab.
 Reduction in the ψ value used in SAP/SBEM or DEAP/NEAP calculations to enable compliance with UK / Irish building regulations.

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: Declared 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
 Thermoblocks are placed below the slab - The base track plate is not fixed directly onto the Thermoblocks.
 A course of Thermoblock sits on top of the foundation blocks supporting the slab connecting the floor insulation to the cavity insulation.



It would be a similar application with a suspended slab

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One course of Marmox Thermoblock (600mm x 100mm/140mm/215mm x 65 or 100mm) is fixed on the concrete/aircrete foundation blocks using 10 – 15mm of ordinary bricklayers' mortar. It should be positioned so that as much of the floor insulation is in contact with the Thermoblock.

- 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.
- The concrete slab sits directly on the Thermoblock and must extend over the whole width of the Thermoblock.
- The top and bottom surfaces of the Thermoblock are cement-based therefore the slab can, if necessary, be fixed to the Marmox blocks using ordinary bricklayers' mortar.

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

Important notes:

1. Thermoblocks should be fully supported and not span voids.
2. The Thermoblock must be approximately the same width as the blocks they are on top of.
3. **Use one course only.** Thermoblocks should not be laid on top of each other in any load-bearing wall.
4. **The base track plate is not fixed directly onto the Thermoblocks**

Waterproofing: A permanent waterproof barrier is created by sealing the block edges to each other with a sealant, **Marmox MSP360** (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