

Specification to eliminate or reduce thermal bridge at base of an External wall with a timber flat roof

Specification:	FLTROOF
Product ref:	Marmox Thermoblock (Standard Type)
Junction Type:	E14
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 of the cold bridge at the junction of a flat roof with an external wall to reduce heat loss from the room below.
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)
Water Absorption <3.5% (to EN771-4).

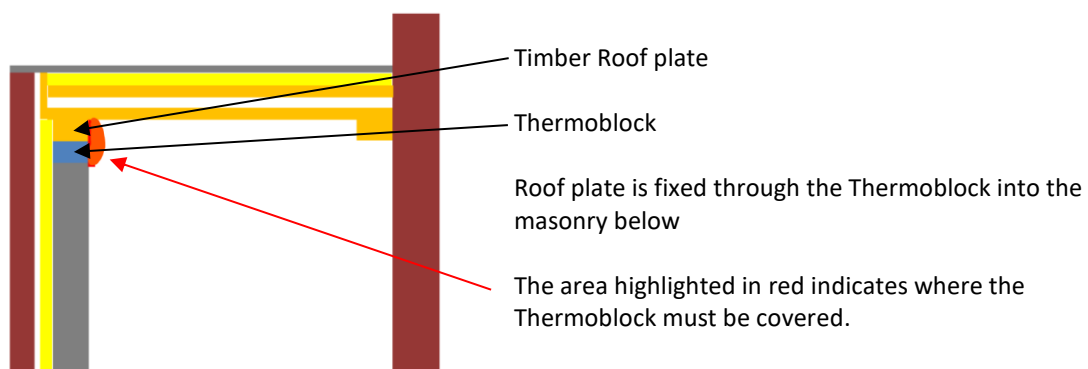
Authorities: ISO9001 (Bureau Veritas)
BRE – Certified Thermal Products Scheme, <http://www.bre.co.uk/certifiedthermalproducts/>
Fire Safety Report: 16781B (Warrington Fire)

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

With insulation above a wooden joisted roof

Where a timber roof plate is fixed on top of the inner leaf, the top course of blocks is replaced with one course of Marmox Thermoblocks and the roof plate is fixed onto that by screwing it through the Thermoblock into the solid block below.

Typical Detail with timber roof



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- A single course of Marmox Thermoblock of the same width as the blocks comprising the inner leaf is fixed on top of those blocks using ordinary 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.
- The timber 'roof plate' which would normally be screw fixed onto the top layer of blocks is now screw fixed to that top layer of blocks but through the middle of the Thermoblocks
- Fixing bolts / resin anchors are placed through the sole plate and then the Thermoblock approximately halfway across its width into the solid base underneath. These *must penetrate the concrete blocks by at least 60mm*
- The roof joists are now fixed to the roof plate as normal.

Important notes:

1. Thermoblock's **vertical face must be clad** either with a cement board or by incorporating a layer of scrim tape, a coating of cement-based render or plaster. Even if in the roof void, the blue coloured vertical face must be covered.
2. Timber roof joists should not be lain directly on top of Thermoblocks at 90° which would impose a point load. A load-spreading roof plate must first be present.
3. Thermoblocks should be fully supported and not span voids.
4. The width of the Thermoblocks should be approximately the same width as the blocks which they are on and the same width as the roof plate.
5. **Thermoblocks cannot be stacked** – only one single layer is permitted
6. Thermoblocks must not be used when there would be potential contact with flame applied bitumen membranes. (*heat applied with a flame gun could distort the shape*)

DPM:

1. Although when sealed together with MSP-360 a row of Thermoblocks creates a permanent waterproof barrier below the roof plate a further DPM is usually still required. A DPM can be positioned above or below the Thermoblock. Because its top and bottom layers are concrete, it can be treated in the same way any concrete unit can be treated.
2. Solvent based primers and solvent based liquid DPMs should not be used with Thermoblock.