Specification to eliminate/reduce the thermal bridge at the base of a Parapet Wall waterproofed with a Hot-Melt Bitumen Membrane

Product ref:	**Marmox Thermoblock (Standard Type)**
Manufacturer:	**Marmox Ltd**
Address:	**Marmox UK, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP.** **01634 835290; Email: info@marmox.co.uk; http://www.marmox.co.uk/.**

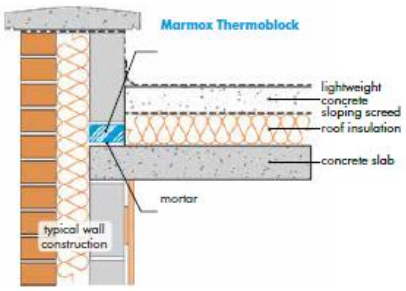
Product Use: Elimination/Reduction of cold bridge in a parapet wall when the base of the wall is to be covered and torched with a hot melt bitumen membrane.
If a heat gun is not going to be applied directly to the base of the wall, this specification should not be used as standard Thermoblock specifications should be followed.

Description: Marmox Thermoblock-PIR is a load-bearing heat-insulating building block resistant to distortion if in contact with a direct heat source. It consists 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 PIR surrounds the columns.

Dimensions: Length = 600mm, Thickness = 53mm, Width = 100mm or 140mm

General Advice:

Thermoblock-PIR is mortared to the base to form the starter course of the parapet wall. A hot melt membrane is applied directly to the side of the Thermoblock prior to laying the screed.

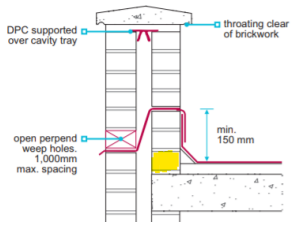


- Fix to the concrete floor or foundation blocks using a standard brick/block laying sand and cement mortar.
- Fix to the bricks/blocks/concrete below using a standard brick/block laying sand and cement mortar.
- Place a bead of Marmox MSP-360 on each stepped edge joint to seal the Thermoblocks together.
- If a primer is recommended, coat the vertical face of the Thermoblock-PIR with a solvent-free primer
- Apply the hot melt bitumen membrane lapping at least 50mm above the height of the Thermoblock-PIR onto the brick/block above it.
- Lay the wall on top of the Thermoblock with standard brick/block laying sand and cement mortar.

Properties: Average λ value of 0.041W/mK (to EN13164/EN13167)
Mean compressive strength of 9.0N/mm^2 (to EN772-1)
Fire resistance >120minutes (to EN1365-1)
Water Absorption <6.5% (to EN771-4).
Vertical R Value: 1.1m^{2}K/W

Authorities: BBA certified (10/4778), ATG (3093), ISO9001 (Bureau Veritas)

DPM: Although when sealed together with MSP-360 a row of Thermoblock-PIRs creates a permanent waterproof barrier, Thermoblock is not officially classed as a DPM. The Damp Proof Membrane therefore should be applied to the parapet wall design as though the Thermoblock were simply just another brick in the wall. Typically, the DPM is fixed to the brick/block one or two courses above the Thermoblock: -



However, if necessary, a DPM can be fixed directly on to the surface of a Thermoblock using standard bricklayers' mortar.

Limitations:

1) The layer of bricks/blocks on top of the Thermoblock is the same width as the Thermoblock.
2) One course only – Thermoblocks cannot be laid on top of each other.
3) Temperatures in excess of 75^{O}C are not appropriate
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 PIR – if it is not, then it cannot be used with Thermoblock.