

Contractor UPDATE

Date: August 2021
No: 202108

Mechanical fixing of bituminous membranes on upstands

Code of Practice BS8217:2005 requires Reinforced Bitumen Membrane capping sheets applied to slopes greater than 5° to be mechanically fixed to prevent membrane slippage. We covered this within our specifications for sloping roofs but BS8217 was vague with regards to vertical upstands and when an upstand is not part of the roof and becomes a wall. BS8217 also did not give any real guidance on upstands above 250mm; for clarity we have put the below together with regards to recommend fixings and fixing patterns for upstands.

Upstand Insulation

Where insulation is being used on an upstand, we will now be specifying a coating of Activator-Primer to be applied to the surface of the insulation (all types) on all insulated upstands prior to the installation of the self-adhesive underlayer. This will ensure sufficient adhesion is achieved between the insulation and underlayer and will remove the need for mechanically fixing through the underlayer prior to installation of the capping sheet.

Fixing of insulation on insulated upstands up to but less than 600mm

The insulation will either be bonded in PU Insulation adhesive or mechanically fixed. Please follow the project specific Bauder specification for the fixing method requirements.

Regardless of fixing method, we advise 1 fixing for BauderROCK: in the centre of the board to retain the board in place.

Fasteners for insulation on insulated upstands exceeding 600mm: -

Use thermally broken tube washers with a minimum 45mm round head, and fasteners. Tube size and fastener type for insulation as recommended by fixing supplier. Screw fix through into the underlying substrate, ensuring that washer is pulled in tight to the insulation.

- **5 fixings for BauderPIR FA-TE:** one in each corner and one in the centre of the board to retain the board in place.
- **1 fixing for BauderROCK:** in the centre of the board to retain the board in place.

Capping Sheets

Terminating capping sheet on the vertical

To terminate the capping sheet on the vertical, we will now be specifying a Bauder aluminium peel bar to be used along with appropriate fixings (depending upon substrate) at 150mm centres. Where it is terminated on the vertical it will need to be covered with the specified flashing material dressed over the top to ensure waterproofing integrity. Should a traditional lead cover flashing be used, then a separating tape will need to be used between the aluminium bar and lead flashing.

A Bauder termination bar is not to be used in this scenario unless it has been specified by Bauder.

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Mechanically restraining the capping sheet on the horizontal

To mechanically restrain the capping sheet when the capsheet is taken onto the horizontal on top of the parapet, we will now be specifying a Bauder aluminium peel bar (at 150mm centres) or screws and washers to be used along with appropriate fixings (depending upon substrate). Please see tables below.

Cap sheet cover flashing:

A separate flashing of capping sheet will be required to cover the fixings (see diagram).

Important Notes

For upstands using self-adhesive membranes only, these will need to be mechanically fixed at the top leading edge of the capping sheet regardless of the height of the upstand. This will be for System Airtech and for areas referred to as 'Torch-Free' zones. Please refer to tables and detail drawings below for fixing guidance.

Upstands that exceed approximately 1100mm:

We do not advocate the use of bitumen waterproofing on upstands exceeding approximately 1100mm due to consideration of the fire regulations. This should be carried out in an appropriate alternative as specified by the client. Please consult with Building Control for confirmation of upstand waterproofing requirements where the height exceeds 1100mm.

Mansard Roofs

(waterproofing the side panels – this includes dormer side panels) – Once the slope of the roof goes above 70 degrees this would not be classed as an upstand (part of the roof), this would be classed as a wall. So, we would not recommend bitumen membranes for this due to consideration of the fire regulations (Building control may advise a lower max. height). This should be carried out in an appropriate alternative as specified by the client.

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Guidance table confirming fixing requirements for insulated upstands:

Bitumen Insulated upstands						
Fixings required for Bauder Insulation & Capping Sheets in accordance with BS 8217 & Bauder recommendations						
Upstand height	Between 250mm & up to 500mm	500mm	600mm	600mm to 900mm	Up to 1100mm	Anything above 1100mm (this includes Mansard and dormer side panels)
Insulation attachment	Follow specification for fixing method			Using thermally broken tube washers and fasteners	Using thermally broken tube washers and fasteners	We do not advocate the use of bitumen waterproofing on upstands exceeding approximately 1100mm due to consideration of the fire regulations. Please consult with Building Control for confirmation of upstand waterproofing requirements where the height exceeds 1100mm.
Insulation facing	Coated with Activator-Primer					
Capping Sheet fixing on the vertical face:	Yes - top leading edge using Bauder aluminium peel bar. Fixings at 150mm centres.					
Capping Sheet fixing on the horizontal face:	Yes - top leading edge using Bauder aluminium peel bar, fixings at 150mm centres. Alternatively, screws and washers, 5 no. fixings per sheet width.					
Notes: <i>Insulated upstands exceeding 600mm = 5 fixings for BauderPIR FA-TE, one in each corner and one in the centre. All upstands using BauderROCK = 1 fixing for BauderROCK in the centre of the board. Screws and washers: IWF-5.2x35 screws together with associated IFC/IW-82x40 galvanised pressed steel washer plates. Fixing pattern: Set two fixings, one either side of the sheet set in 50mm from each edge. The three remaining fasteners equally spaced in between. For upstands using only self-adhesive membranes, these will need to be mechanically fixed at the top leading edge of the membrane with Bauder aluminium peel bar regardless of the upstand height. This will be for System Airtech and for areas referred to as 'Torch-Free' zones.</i>						

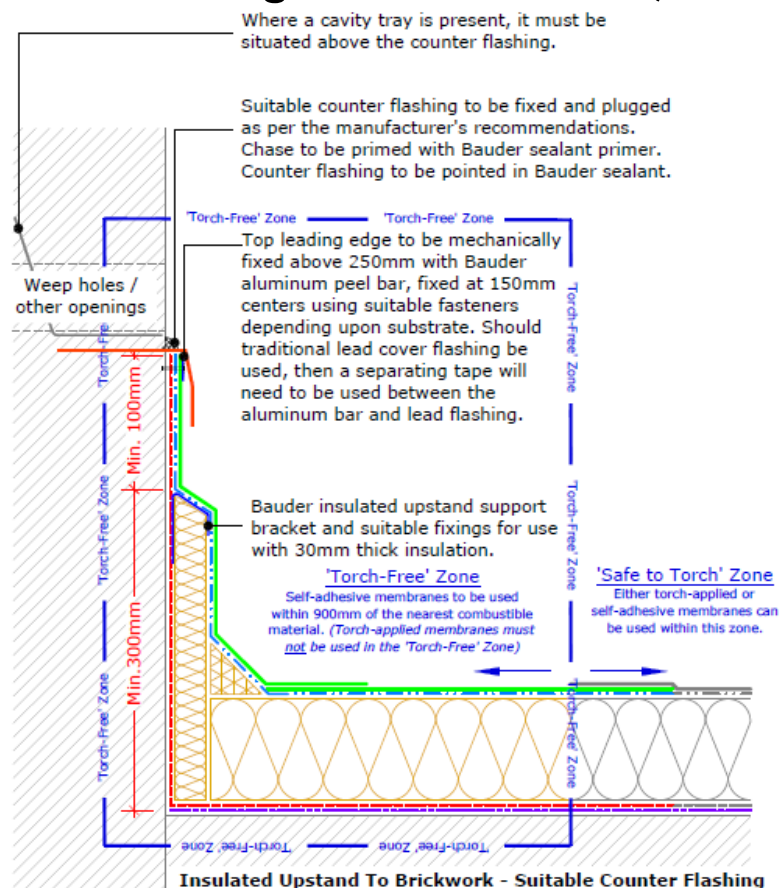
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Guidance table confirming fixing requirements for un-insulated upstands:

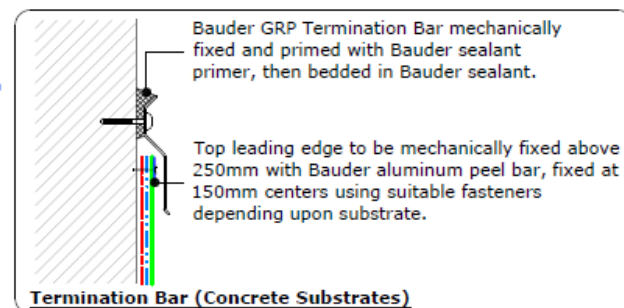
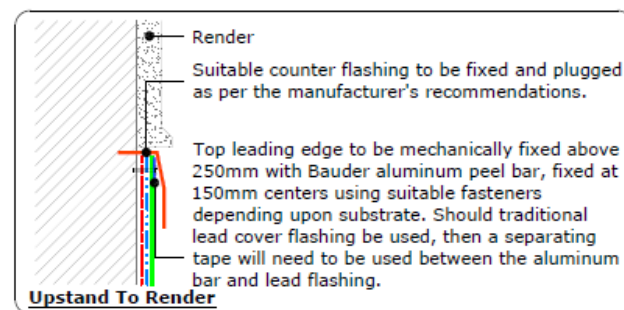
Bitumen Un-Insulated upstands						
Fixings required for Bauder Capping Sheets in accordance with BS 8217 & Bauder recommendations						
Upstand height	Between 250mm & up to 500mm	500mm	600mm	600mm to 900mm	Up to 1100mm	Anything above 1100mm (this includes Mansard and dormer side panels)
Substrate	Coated with specified primer					We do not advocate the use of bitumen waterproofing on upstands exceeding approximately 1100mm due to consideration of the fire regulations. Please consult with Building Control for confirmation of upstand waterproofing requirements where the height exceeds 1100mm.
Capping Sheet terminating on the vertical face:	Yes - top leading edge using Bauder aluminium peel bar. Fixings at 150mm centres.					
Capping Sheet terminating on the horizontal face:	Yes - top leading edge using Bauder aluminium peel bar, fixings at 150mm centres. Alternatively, screws and washers, 5 no. fixings per sheet width.					
Notes: <i>Screws and washers: IWF-5.2x35 screws together with associated IFC/IW-82x40 galvanised pressed steel washer plates. Fixing pattern: Set two fixings, one either side of the sheet set in 50mm from each edge. The three remaining fasteners equally spaced in between.</i> <i>For upstands using only self-adhesive membranes, these will need to be mechanically fixed at the top leading edge of the membrane with Bauder aluminium peel bar regardless of the upstand height. This will be for System Airtech and for areas referred to as 'Torch-Free' zones.</i>						

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Standard details for fixing on the vertical (torch-free)



Alternative Details



Situations not covered in the above details will occur on site and we may have details for these scenarios. In these instances please contact Bauder Ltd. Please do not hesitate to contact me on the number below, should you have any queries on the above.

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