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Cold Applied Liquid Systems

Our LiquiTEC cold applied liquid systems are based on the most advanced Poly Methyl Methacrylate (PMMA) technology.

They are simple to install, fast curing and long lasting. This makes them suitable for use on all kinds of flat roof, balcony, walkway and terrace waterproofing and surfacing applications, whether the project is new build or refurbishment.

OVERVIEW OF WATERPROOFING

MORRIS BLITZ COURT

Location: **Hackney**

"Bauder delivered a comprehensive waterproofing solution of the highest quality; providing expert technical support throughout the project. They have successfully transformed this housing estate in terms of appearance and functionality."

Harsha Amin, Project Manager from Hackney Homes

SYSTEMS

Our LiquiTEC cold **applied** liquid systems are based on PMMA resin technology. This combines ease of application without using hot works, exceptionally fast cure, and durability, to provide a cold **applied** liquid waterproofing product second to none.

Bauder LiquiTEC Roof System

This polyester reinforced system is intended for both new build or refurbishment projects and can be applied to a wide variety of substrates including concrete and timber decks, as well as most existing waterproofing membranes such as asphalt, bitumen membranes, and even synthetic single ply, subject to condition and suitability. The system is covered by our guarantee.

The BBA certificate relating to this system states that under normal service conditions it will have a service life in excess of 25 years.

Bauder LiquiTEC Balcony, Walkway and Terrace System

This incorporates the technology of the Bauder LiquiTEC Roof System with the added benefit of a wearing course to make it suitable for use in both light and heavily trafficked areas. If an insulated system is required this will be an inverted roof construction, with a surfacing such as pavers or timber decking. The system is supported by a comprehensive guarantee.

The BBA certificate states that under normal service conditions it will have a service life in excess of 15 years.

Key Features

- Totally cold applied.
- Installation possible at very low temperatures.
- Withstands ponding water.
- Thick layer system.
- Exceptionally fast curing.
- Short trafficking times.
- Compatible with a wide range of substrates.
- Seamless – no joints or fixings.

COLD APPLIED SYSTEMS

Specification Support

Specification downloads:
www.bauder.co.uk/technical-centre

nbsPlus BIM DWG

Telephone helpline:
0845 271 8800

BBA APPROVAL INSPECTION TESTING CERTIFICATION CERTIFICATE 14/5152

CE bre LRWA

ENVIRONMENTAL CREDENTIALS

Building Research Establishment (BRE) Green Guide

The BRE Green Guide to Specification gives our products and systems various generic ratings, depending on the type of deck construction and the support structure used.

Generic Product Ratings

- 'A+' generic rating, element number 1212530006 when used with warm roof insulation on a profiled steel deck with steel supports.
- 'C' generic rating, element number 1212530060 when used with pre-cast concrete hollow slab with screed, inverted insulation with pebble ballast.

Environmental Product Declarations (EPD)

The Eco Platform accreditation is recognised by the BRE as valid and transferable environmental documentation towards obtaining BREEAM credits within their assessment process for BREEAM UK New Construction 2018.

Within our cold applied systems we have the following EPD certification.

- **Liquitec Products**
  EPD-DBC-20130101-IBE1-EN.
- **PU Insulation - Aluminium Facing**
  EPD-IVP-20140207-IBE1-EN.

All certificates can be downloaded from our website bauder.co.uk/technical-centre

Product and System Composition

All our LiquiTEC products are solvent and halogen free; and unlike many other systems, they do not contain styrene or isocyanate, which are linked to serious health risks.

Insulation within a Warm Roof Construction

The BauderPIR insulation used within the warm roof construction of a cold applied waterproofing system has extremely high thermal efficiency and is CFC and HCFC free. It has zero ODP and a Global Warming Potential of less than 5Kg CO_2 - Eq/Kg. As part of our PIR insulation manufacturing process, offcuts and waste are readily recycled and used in the production of hand cleansers and decking materials.

The embodied energy of our rigid polyurethane PIR insulation accounts for as little as 4% of the energy the board can save during its serviceable life. With buildings accounting for 50% of the energy consumption in Europe, the inclusion of insulation when installing new or refurbished roofs plays a significant part in reducing CO_2 emissions.

TECHNICAL CREDENTIALS

BBA Certification
Bauder LiquiTEC systems have been tested and approved by the BBA and carry certificate No. 14/5152

Fire Performance
Our LiquiTEC Warm Roof System and LiquiBALKON system hold ENV1187 fire classification BROOF (t4) and are verified by the BBA as 'unrestricted' and suitable for use on any part of a roof or terrace.

An unreinforced balcony system with LiquiPAVE RF has been tested to EN ISO 11925-2 and 9239-1 and satisfied the criteria for Euroclass Bfl-S1 according to EN 13501-1

Root Resistance for Green Roofs
The Bauder LiquiTEC system meets FLL guidelines, which is the benchmark test for root resistance in Europe.

Durability
The waterproofing products are resistant to ponding water and also incorporate a polyester fleece to provide increased membrane strength, life expectancy and resistance to cracking.

Safety Conscious Installation Technology
The Construction, Design and Management Regulations 2015 place specific duties on designers, contractors and building owners to take fire safety into account throughout a building's life cycle, making sure that all people on site are protected if a fire does ever occur.

By utilising the LiquiTEC Cold Applied System, this flame-free solution not only eliminates any risk of fire from hot works but also means that in refurbishment situations buildings can remain fully operational throughout, with minimal disruption.

Bonding Superiority
The PMMA system delivers superior adhesion between layers as well as to most deck structures or existing waterproofing that requires an overlay solution.

LIQUITEC ROOF SYSTEM

Our cold applied **liquid** roof system, LiquiTEC, is an extremely durable PMMA resin with fast curing times, completely cold applied and suitable for use on most structural substrates. The roof area can be accessed within hours of installation and it delivers a UV stable, seamless waterproof membrane of the highest quality.

The system can be configured for a cold or warm roof construction and is fully reinforced with a tough polyester fleece for increased membrane strength, life expectancy and resistance to cracking. Within the insulated solution, our self-adhesive KSD DUO elastomeric bitumen membrane is used as both an air and vapour control layer and as the carrier membrane on which the LiquiTEC products are applied.

Key Features

- Totally cold applied.
- BBA life expectancy in excess of 25 years.
- Polyester reinforced.
- >2mm dry film thickness.
- Exceptionally fast curing.
- Compatible with a wide range of substrates.
- Seamless - no joints or fixings.
- Solvent, isocyanate and halogen free.
- Fire classification BROOF (t4) and verified by the BBA as 'unrestricted' and suitable for use on any part of a roof.
- Root resistant.
- Single point guaranteed system.

When to Specify

Apart from the main benefit of being cold applied, LiquiTEC is particularly suited to areas where membrane systems would be impractical due to a high degree of detailing, or when access to install waterproofing is restricted. The system is appropriate for both new build or refurbishment projects onto most substrates and can be used with extensive and intensive green roofs.

COLD APPLIED SYSTEMS

Specification Support

Specification downloads:
www.bauder.co.uk/technical-centre

NBSPlus BIM DWG

Telephone helpline:
0845 271 8800

BBA APPROVAL INSPECTION TESTING CERTIFICATION
CERTIFICATE 14/5152

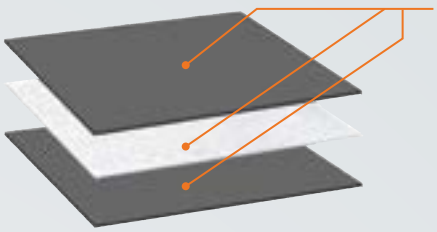
CE bre LRWA

LIQUITEC ROOF SYSTEM

Example System Configurations

COLD ROOF SYSTEM

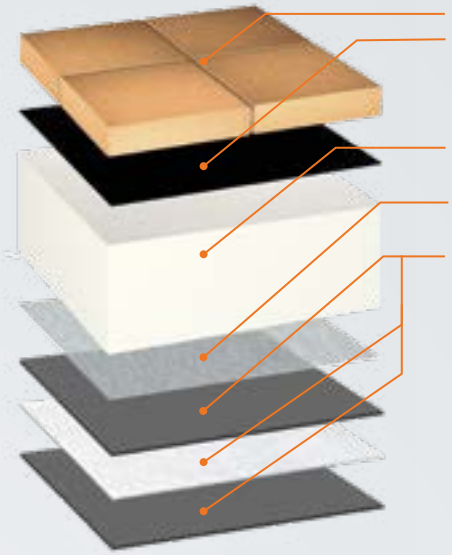
Used in new build or refurbishment applications in a cold roof construction. It is compatible with most existing waterproofing products, making it suitable for use as an overlay system.



Bauder LiquiDEK
cold applied liquid waterproofing, fully reinforced with a tough polyester fabric. The deck is sealed using Bauder LiquiPRIME to improve adhesion.

INVERTED ROOF SYSTEM

Used in new build or refurbishment applications in an inverted roof construction. It is compatible with most existing waterproofing products, making it suitable for use as an overlay system.



Paving/Pebble Ballast

BauderJFRI Vapour Permeable Membrane
designed to increase the thermal performance of the insulation whilst preventing fines from working their way beneath.

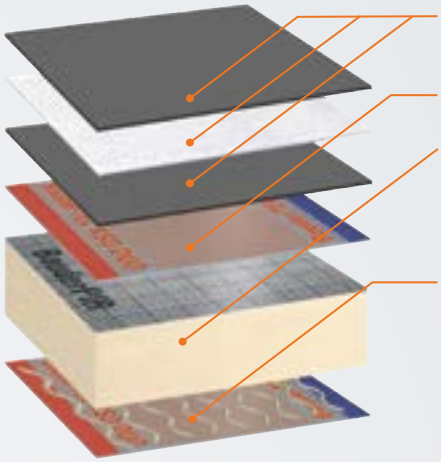
BauderJFRI
inverted insulation to achieve required U - value.

Bauder Filter Fleece
separation and filtration membrane.

Bauder LiquiDEK
cold applied liquid waterproofing, fully reinforced with a tough polyester fabric. The deck is sealed using Bauder LiquiPRIME to improve adhesion.

WARM ROOF SYSTEM

Used in new build or refurbishment applications in a warm roof construction and incorporates BauderPIR FA-TE insulation and self-adhesive bitumen membranes, BauderTEC KSD DUO.



Bauder LiquiDEK
cold applied liquid waterproofing, fully reinforced with a tough polyester fabric.

BauderTEC KSD DUO
self-adhesive elastomeric bitumen carrier membrane.

BauderPIR FA-TE Insulation
extremely thermally efficient, lightweight, fire resistant and zero ODP rated. The insulation is foil-faced on both sides for increased thermal efficiency. BauderROCK can be used as an alternative insulant.

BauderTEC KSD DUO
self-adhesive elastomeric bitumen air and vapour control layer the deck is sealed using Bauder Activator-Primer to improve adhesion.

System Variations

The standard system colour is blue grey (approx. RAL 7031), although other colours can be achieved by applying an additional finish coat.

Where required, BauderROCK insulation can e used to improve the acoustic performance of the warm roof system.

Finish Colours

RAL 7030	RAL 7031	RAL 7043
Stone Grey	Blue Grey	Traffic Grey

www.bauder.co.uk/technical-centre

PROJECTS

LIQUITEC BALCONY, WALKWAY AND

TERRACE SYSTEM

The Bauder LiquiTEC Balcony, Walkway and Terrace System was developed to provide the optimum combination of aesthetic and functional requirements; designed to be slip resistant and hard wearing they can also be used for stairs and stairwells.

Cold application and exceptionally fast cure times are a distinct advantage when carrying out work on areas continuously in use by the building's occupants, inconvenience is kept to a minimum.

Key Features

- Suitable for new build and refurbishment.
- BBA stated life expectancy in excess of 15 years.
- Totally cold applied.
- Exceptionally rapid cure times.
- Seamless with no fixings.
- Flexible, anti-skid, thick layer system.
- Fully bonded with excellent interlayer adhesion.
- Resistant to chemicals.
- Tough and durable enough to withstand all types of balcony traffic.
- Choice of two surface finishes.
- Can be installed all year round in the majority of climatic conditions.
- Compatible with almost all substrates.
- Quick and simple to install.
- Can be overlaid or repaired as required at any time in the future.
- Fire classification BROOF (t4) for Liqui BALKON warm roof system and verified by the BBA as 'unrestricted' and suitable for use on roof terraces over occupied areas. An unreinforced balcony system with LiquiPAVE RF has been tested to EN ISO 11925-2 and satisfied the riteria for Euroclass Bfl-S1 according to en 13501-1.
- Guaranteed system.

When to Specify

The system is suitable for application over almost all structural substrates commonly used for balcony, walkway and terrace construction and in refurbishment can be applied directly to asphalt and most other waterproofing and surfacing products typically found on existing structures. This avoids the unnecessary expense, risk and disruption of removing existing waterproofing and minimises installation time on site.

COLD APPLIED SYSTEMS

Specification Support

Specification downloads:
www.bauder.co.uk/technical-centre

NBS Plus BIM DWG

Telephone helpline:
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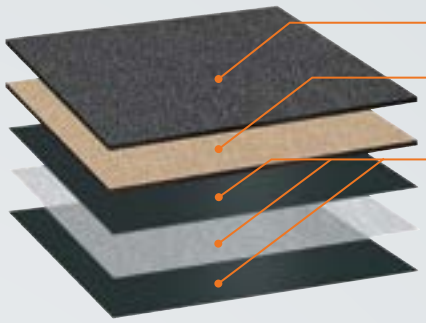
BBA APPROVAL INSPECTION TESTING CERTIFICATION CERTIFICATE 14/5152 CE bre LRWA

LIQUITEC BALCONY, WALKWAY AND

Example System Configurations

REINFORCED SYSTEM

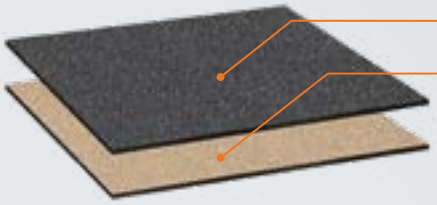
Used wherever there are occupied premises beneath. It is especially suitable for the overlay of failed or worn asphalt, helping to avoid the costs, disruption and risks associated with its removal.



Bauder LiquiFINISH
abrasion resistant system seal coat.
Bauder LiquiPAVE RF
self levelling surface layer hard wearing crystal quartz aggregate.
Bauder LiquiBALKON
certified reinforced waterproofing layer, fully reinforced with Bauder 110g reinforcement fleece, a tough polyester fabric. The substrate is sealed with Bauder LiquiPRIME to improve adhesion.

UNREINFORCED SYSTEM

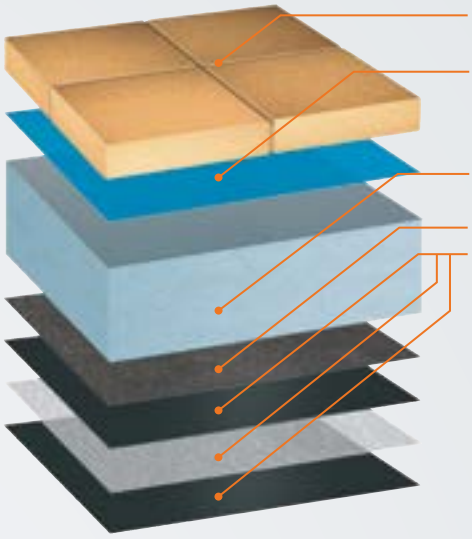
Used over unoccupied premises, such as cantilevered structures. Reinforcement is still used to upstands and details, as structural movement may occur.



Bauder LiquiFINISH
abrasion resistant system seal coat.
Bauder LiquiPAVE RF
self levelling surface layer with large grain, hard wearing crystal quartz aggregate. The substrate is sealed with Bauder LiquiPRIME to improve adhesion.

BURIED REINFORCED SYSTEM

Paving or timber decking can be used over the reinforced waterproofing layer with the addition of a slip layer and protection layer to prevent the possibility of mechanical damage. This system should also be used when insulation is required as shown in the illustration.



Paving
on supports or screed, or timber decking.
Bauder WFRL
designed to increase the thermal performance of the insulation whilst preventing fines from working their way beneath.
Bauder Inverted Insulation
where it is necessary to provide an insulated solution.
Bauder Filter Fleece
Bauder LiquiBALKON
cold applied liquid waterproofing layer, fully reinforced with Bauder 110g reinforcement fleece, a tough polyester fabric. The substrate is sealed with Bauder LiquiPRIME to improve adhesion.

A finer quartz grade is also available for projects requiring a smoother surface finish.

Finish Colours

The following finish colours are available as standard.

RAL 7030	RAL 7031	RAL 7043
Stone Grey	Blue Grey	Traffic Grey

www.bauder.co.uk/technical-centre

TERRACE SYSTEM

TECHNICAL DESIGN

Cold Applied **Liquid** Systems

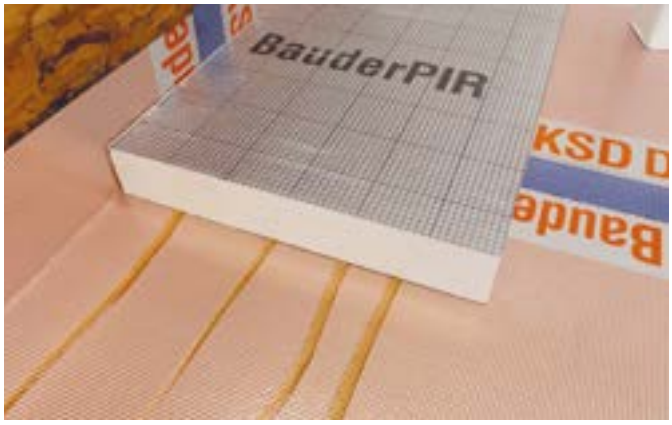
www.bauder.co.uk/technical-centre

INSTALLATION METHODS

Warm Roof Application Sequence

MEMBRANE AND INSULATION LAYERS

No.1: Air and vapour control layer installed to primed substrate, terminating 100mm past the surface level of the proposed insulation.

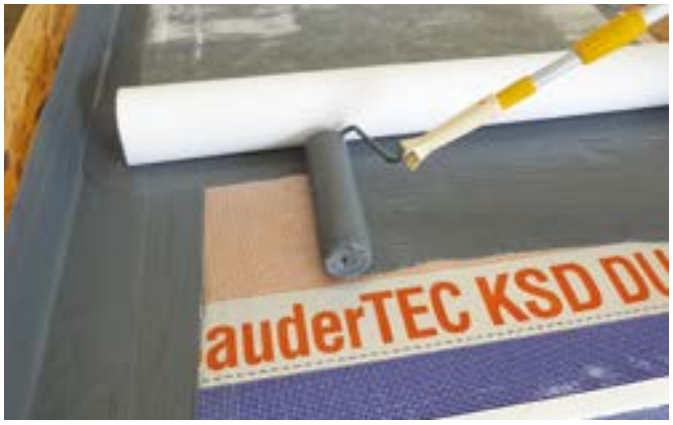


No.2: Bauder insulation installed with insulation adhesive.

No.3: Carrier membrane installed over the insulation, lapping with the AVCL at details by 50mm.

LIQUID LAYERS

No.4: Reinforced LiquiDETAIL is applied to all upstands and details.



No.5: LiquiDEK is applied over the carrier membrane and the reinforcement fleece is rolled in..

No.6: A further coat of LiquiDEK over the reinforcement fleece wet-on-wet completes the installation.

Balcony, Walkway and Terrace Application Sequence

PRIMING

No.1: Whenever priming is necessary it is applied to the details first, followed by the main area. Masking tape is used to achieve a neat edge.

UPSTANDS AND DETAILS

No.2: A generous layer of LiquiDETAIL resin is applied to the upstand then the fleece is embedded into the wet resin, making sure that it is fully saturated. The masking tape is removed whilst the material is still wet.

MAIN AREA WATERPROOFING

No.3: The LiquiBALKON is applied to the substrate and the fleece embedded, pressing free any trapped air to ensure the fleece is fully saturated.

Another layer of LiquiBALKON is applied, wet-on-wet to ensure full saturation.

SURFACING LAYER

No.4: LiquiPAVE RF is then applied with a trowel.

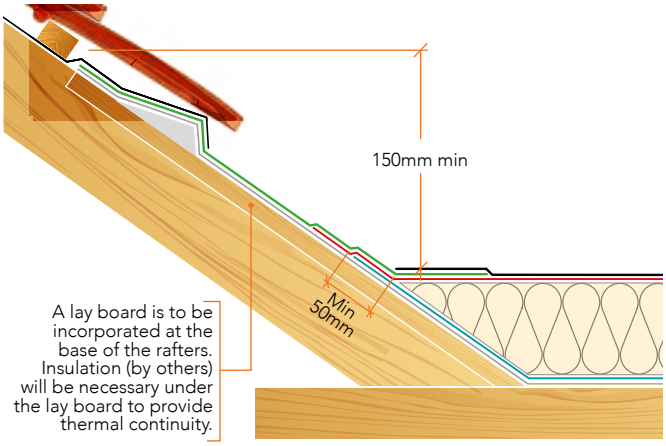
No.5: The quartz aggregate is quickly embedded whilst the resin is still wet, by broadcasting to excess.

No.6: The excess is then swept off once cured.

No.7: Mask the details again and apply a generous layer of LiquiFINISH to the details first, remove the masking tape while the resin is still wet. The deck is then treated by pouring the LiquiFINISH and spreading with a hard rubber squeegee, then back rolling with a dry lambswool roller.

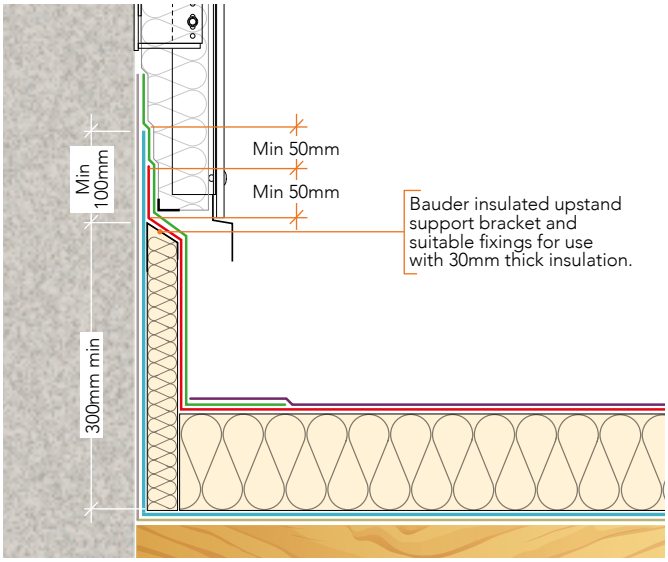
GENERAL DETAILING

LiquiTEC Warm Roof



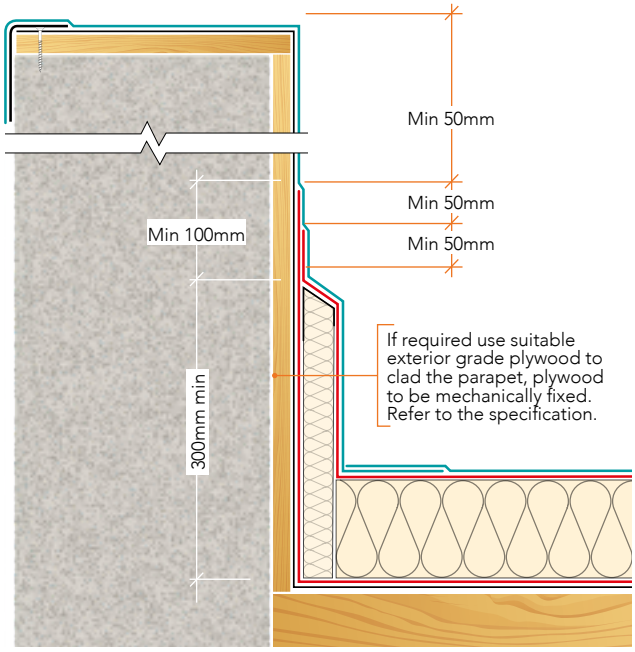
Upstand to Pitched Roof

This is a common detail where it will be necessary to provide a lay board that allows a vertical upstand height of 150mm above the finished waterproofing level in order to prevent water ingress and to comply with Codes of Practice BS 8217.



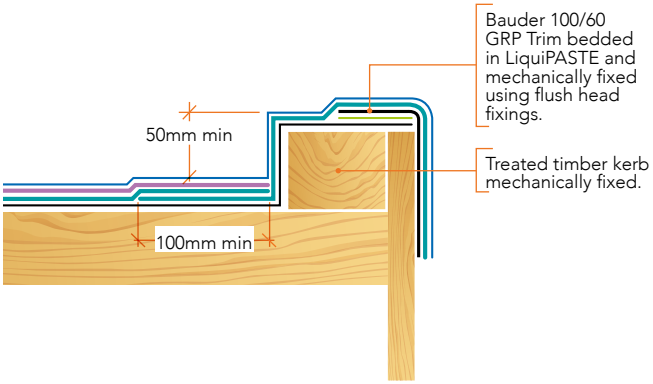
Insulated Upstand to Vertical Cladding

The cladding system should be installed after the roof waterproofing to allow the waterproofing to be detailed correctly. 30mm thick insulation to the upstand prevents thermal bridging from the room beneath, and will be easily held in place by the Bauder insulated upstand support bracket.



Insulated Parapet

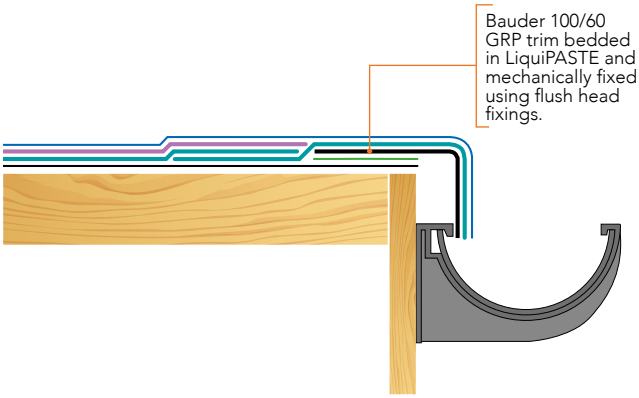
Taking the waterproofing up and over the parapet and terminating onto a trim, or under a capping or coping stone totally encompasses the detail, ensuring that water cannot find its way through the inside or top of the wall and behind the Bauder system.



Perimeter Kerb

The reinforced LiquiDETAIL system is dressed over the trim to its full extent and past the edge of the downward facing edge.

Once cured, the excess is trimmed off to a neat finish.

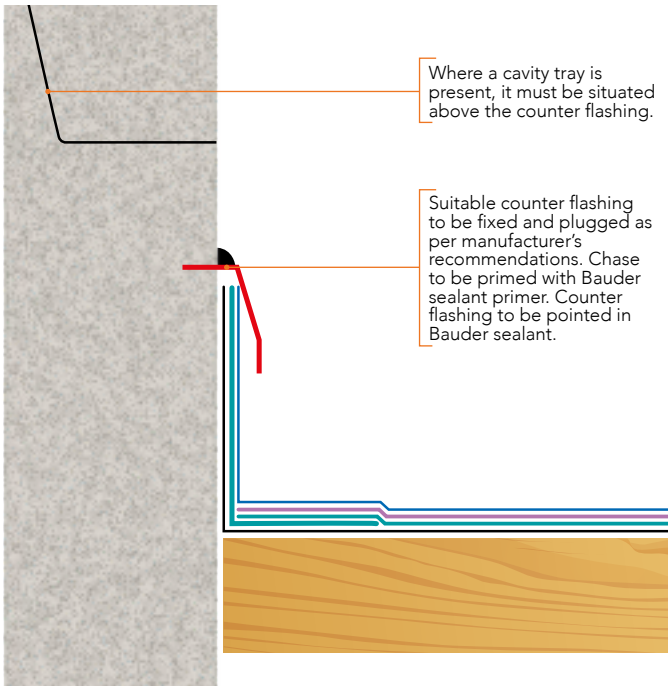


External Gutter

Trim should be bedded in LiquiPASTE to take out any irregularities in the underlying substrate and facilitate alignment of adjacent sections.

The reinforced LiquiDETAIL syste is dressed over the trim to its full extent and past the edge of the downward facing edge.

Once cured, the excess is trimmed off to a neat finish



Uninsulated Upstand to Brickwork

Although the LiquiTEC system is self-terminating, it is essential to provide some protection to the top leading edge on vertical upstands, ideally with a counterflashing inserted into a cut chase. Where a chase cannot be cut, a surface mounted termination bar may be used, bedded in Bauder sealant.