H92 Wienerberger Corium Brick Tile Cladding System

To be read with Preliminaries/General conditions.
Wienerberger Corium Brick Tile Cladding System

Wienerberger Corium Brick Tile Cladding comprises longitudinally interlocking steel backing sections profiled to allow Corium Tiles to be clipped into it. The vertical and horizontal joints between the tiles are pointed with Parex Historic KL Mortar which is hydrated lime/sand and ground granulated blast furnace slag (GGBS) mortar manufactured to BS EN 998-2. The nominal weight of the system including the mortar is approximately 68kg/m²

Approved trained installation contractors only to install the system and components.

120 CORIUM BRICK TILE CLADDING

- Drawing reference(s): (insert)
  Corium Brick Tile Cladding System –
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Manufacturer and reference: **Wienerberger Ltd,**
Wienerberger House, Cheadle SK8 3SA
Facades Department
Tel; 0161 491 8200

Supplier: (UK & Ireland) Taylor Maxwell Ltd, 6080 Knights Court, Solihull Parkway, Birmingham B37 7WY
Tel: 0121 329 1445
email: enquiries@taylor.maxwell.co.uk

Type: Vented System

-Tile, rail and mortar weight: 68kg/m² Main wall areas
-Water vapour transmission resistance: 8.5MNs/g
-Fire performance: Class A1 to EN 13501-1
-Thermal Conductivity: 0.77 W/m²K
-System Thickness: Min. 33mm total (Corium tile & rail only)
-Finish/colour: -Standard unglazed / glazed / semi-glazed (specifier to select, consult Taylor Maxwell).
-Joint width: To suit design requirements (typically 10mm vertical joint width, 10mm horizontal joint width)
-Air gap from back face of ~~tile~~ Corium rail to out face of insulation: As per Architectural details (minimum 15mm).
10mm horizontal joint width)

-Support system:

- Manufacturer: Plastestrip Ltd.
  Product reference: FastFrame.
- Supplier: (UK & Ireland) Taylor Maxwell Ltd, 6080 Knights Court, Solihull Parkway, Birmingham B37 7WY
  Tel: 0121 329 1445
  email: enquiries@taylor.maxwell.co.uk
- Material: Aluminium to BS EN-755-9 & BS EN-573-3:2003
- Number and location of fasteners: contact Taylor Maxwell Ltd for FastFrame checklist regarding static calculation assessment.

Material: Clay brick tile and Magnelis coated steel/Stainless Steel backing rail.

-Tile: Corium tiles are fired clay extruded brick tiles manufactured to the following nominal dimensions:
Tile Height: 65mm standard.
Tile Length: 215mm standard.
Tile Thickness: 32mm
Tile lip thickness: 13mm

Bespoke sizes available, consult Taylor Maxwell Ltd

Other incorporated standard tile components:
Corner tiles: Factory bonded / site bonded/ one piece (specifier to select, consult Taylor Maxwell)
Soffit tiles: Required? Specifier to complete.
Stop end tiles: Required? Specifier to complete.
Air brick tile (1600mm² free vent area): Required? Specifier to complete.
Soldier brick tile (to fit horizontal rails only): Required? Specifier to complete.
None standard face size or depth: Required? Specifier to complete.

- Corium Backing Rail:

0.7mm thick Magnelis metallic coated steel (ZM 310 and ZM 430), coated with a zinc-aluminium-magnesium alloy, manufactured to BS EN 10346:2015. The coating for Magnelis ZM 310 and ZM 430 steel is applied on both sides and is composed of zinc, 3.5% aluminium, 3% magnesium, with a coating weight of 310 and 430 g.m-2, and coating thicknesses of 25 and 35 µm respectively.

The steel backing sections are profiled to suit the brickwork coursing height, mounted horizontally or vertically and mechanically fixed to the supporting subframe. The steel backing sections are fixed onto the aluminium subframe using a minimum of 5.5 x 25mm (diameter x length) stainless steel self-drilling screws with an 8mm hexagonal head and integral sealing washer. For timber subframes the fixings must be specified by an appropriately qualified structural engineer.

Magnelis ZM310. For use in normal environments, categories C3 and C4.
Magnelis ZM430. For use in aggressive industrial and coastal environments, category C5.
Stainless steel. For use in aggressive industrial and coastal environments, category C5.
Please refer to the Corus environmental documents and the Magnelis data sheets.

Ancillary items for use with the system (not included in BBA certificate) as per architectural details, these may include but not limited to:

- Cellular polyethylene or polyurethane material with a two-part polysulphide sealant
- Compressible joint filler for use in the expansion joints
- Support subframe
- Insulation
- Fire barriers
- Breather membrane
- Mechanical fixings to substrate
- Substrate backing walls
- Cavity protection mesh

GENERAL REQUIREMENTS/PREPARATORY WORK

210 DESIGN
- Complete the detailed design of the brick tile cladding and associated features shown on the preliminary design drawings to meet the requirements of this specification
- Co-ordinate detailed design with that for all related works.

225 INFORMATION TO BE PROVIDED WITH TENDER: Submit to the CA the following brick tile cladding particulars:
- Typical plan, section and elevation drawings at suitable scales.
- Typical detailed drawings at large scales, including (insert any specific details which should be clarified at tender stage)
- Technical information and certification demonstrating compliance with the specification of proposed incorporated products and finishes, including (insert product/finish types generically specified)
- Certification, reports and calculations demonstrating compliance with the specification of the proposed brick tile cladding.
- Proposals for connections to and support from the primary support structure.
- Proposals for any primary support structure additional to that shown on preliminary design drawings.
- Schedule of builder's work, special provisions and special attendance by others.
- Examples of standard documentation from which the project quality plan will be prepared.
- Preliminary fabrication and installation method statements and programme.
- Proposals for replacing damaged or failed products.
- Areas of non-compliance with the specification.

230 INFORMATION TO BE PROVIDED AFTER ACCEPTANCE OF TENDER: Submit to the CA within (insert) weeks of appointment the following brick tile cladding particulars:
- A schedule of detailed drawings and dates for submission for comment.
- A schedule of loads that will be transmitted from the brick tile to the structure.
- Proposed fixing details and systems relevant to the structural design and construction with methods of adjustment and tolerances.
- A schedule of all fabrication tolerances/size tolerances.
- A detailed fabrication and installation programme in compliance with the Main Contract master programme.
- A quality plan in compliance with the CWCT 'Guide to good practice for facades', Section 6.
- Proposals to support any outstanding applications for Building Regulation consents or relaxations.

235 INFORMATION TO BE PROVIDED BEFORE COMMENCEMENT OF BRICK TILE CLADDING WORK: Submit to the CA before testing or fabrication the following Brick Tile cladding particulars:
- Detailed drawings to fully describe fabrication and installation.
- Detailed calculations to prove compliance with all design/performance requirements.
- Project specific fabrication, handling and installation method statements.

- Certification for all incorporated components manufactured by others confirming their suitability for all locations in the brick tile cladding.
- Recommendations for spare parts for future repairs or replacements.
- Recommendations for safe dismantling and recycling or disposal of all products.

240 PRODUCT SAMPLES: Before commencing detailed design provide the CA with identified samples of:

DESIGN/PERFORMANCE REQUIREMENTS

310 GENERALLY:
- The Corium Brick Tile System, when installed in accordance with the BBA certificate, is satisfactory for use as a protective and decorative cladding on external walls of domestic and non-domestic buildings of steel-frame, masonry and timber-frame structures
- It is important for designers, planners, contractors and/or installers to ensure that the installation of the system is in accordance with the installation instructions and the information given in the BBA certificate. All design aspects should be checked by a suitably qualified and experienced individual in accordance with the requirements of the relevant national Building Regulations and Standards.
- The system transfers its self-weight and design wind loads through the supporting subframe to the substrate wall. The substrate wall and supporting subframe must be capable of resisting the associated loads. Particular care is required around window and door openings to ensure that the structure is capable of sustaining the additional weight of the system. The maximum spacing between vertical subframe supports must not exceed 600mm centres (horizontally). In a soffit situation the engineer should specify the sub-structure and number of fixings required based on the weight of the system and any other requirements, e.g. wind loads etc.
- Ventilation and drainage must be provided behind the system. The clear cavity between the back of the tile and substrate wall (or insulation within the cavity) must be at least 15mm wide to ensure a minimum ventilation area of 1000mm² per metre run of cladding is achieved. Joint gaps between the tiles are filled in with pointing mortar. All ventilation openings around the periphery of the system should be suitably protected with mesh to prevent the ingress of birds, vermin and insects.
- The substrate wall to which the system is fixed should be watertight.
- External plumbing should be removed before installation, and alterations made to underground drainage, where appropriate, to accommodate repositioning on the finished face of the system.
- The fixing of rainwater goods, satellite dishes, clothes lines, hanging baskets and other similar items to the system is out side the scope of the BBA certificate.
- It is essential that the system is installed and maintained in accordance with the conditions set out in the BBA certificate.

380 GENERAL MOVEMENT: Vertical expansion joints to allow for horizontal movement should be provided through tile, mortar and steel backing sections at a maximum of 12m centres in the brick tile cladding. The actual spacing and position of the joints should coincide with movement joints in the substrate wall and allow for the same degree of movement. They should extend throughout the full height of the building including parapets etc. Movement joints in the structure of the building should be carried out through to the face of the cladding.
Horizontal expansion joints, to allow for vertical movement, should be provided at a maximum of 9m centres coincident with a floor and more frequently in timber-frame structures. For steel framed structures, reference to the structural engineer's details for deflection at the floor level and movement joints in the substructure should be made.

430 THERMAL PROPERTIES:
- Thermal Conductivity of 0.77 W/m²K for the Corium system (Tile and backing rail)

470 FIRE RESISTANCE OF CORIUM SYSTEM: The system components are class A1 as defined by the national Building Regulations and stated in the BBA certificate.

735 FIXINGS AND FASTENERS:

- Minimum 5.5 x 25mm (diameter x length) stainless steel self-drilling screws with 8mm hexagonal head and integral sealing washer for aluminium frame structures.
- For timber subframes the fixing must be specified by an appropriately qualified structural engineer.

FABRICATION AND INSTALLATION

910 GENERALLY:

- Installers must be trained and approved by the CA who can provide technical assistance at the design stage and at the start of the installation.
- The substrate wall face to which the system is fixed should be flat, vertical and capable of supporting appropriate loads, Vertical subframe supports are required at maximum 600mm centres.
- Accurate setting out of the system must be achieved. The first steel backing section must be positioned level and fixed to the supporting structure. The next steel profile must be aligned alongside to provide a continuous run or engaged to lie parallel to the adjacent profile.
- The steel profiles must be fixed with the specified mechanical fixing at no less than 18 fixings per square metre. It must be ensured that all steel backing sections are clipped together using the interlock action of the former sections.
- The top steel backing section is levelled and fixed at two points. Whilst allowing those below to hang freely. The intermediate section(s) is then re-positioned horizontally to form staggered joints as required, and the bottom section is then aligned vertically with the measuring tool supplied and secured.
- The steel profiles must be fixed at a maximum 1200mm centres along their length. Fixings should be staggered between adjacent vertical steel backing sections. Tiles will not interfere with the head of the fixing as it has a continuous horizontal recess in its back face.
- Tiles are inserted into the steel backing section with the top of the tile first. Applying a slight cushioned blow with a rubber mallet to the bottom of the tile forces it into its desired location. Care must be taken to minimise the risk of abrasion to the steel backing sections.
- The position of the tile should be set out from the corners inwards on each elevation adjusting the vertical joint width to suit variations in the tile lengths. It must always be checked that the tiles are fully into the steel backing section.
- Pointing mortar is applied using manual mechanical or compressed air based pumps with controlled nozzle applications.
- The system components can be readily handled on site and may be cut or trimmed with the appropriate type of cutting equipment. Reasonable precautions must be taken to prevent damage before, during and subsequent to installation.
- Standard tiles are delivered to site on timber pallets with polythene shrink wrapping, containing 960 units and weighting approximately 768kg. Other packaging formats are available on request.
- The pallets of tiles must be stored on a flat surface and in dry conditions
- The steel backing sections are delivered to site in 2.4m lengths, banded in packs, stacked horizontally on enough bearer to prevent distortion. Each pack contains approximately 16.2m²

and weighs approximately 120kg. They must be stored dry and supported on timber battens on level ground.

- All steel backing sections must be cleaned carefully to remove all traces of cutting swarf etc, immediately after cutting and must be checked for cleanliness. They must not be exposed to any organic solvents.
- Care should be exercised when handling steel backing sections to avoid injury from sharp edges. Protective clothing should be worn.
- The mortar is packed in in paper sacks of 25kg bearing the batch number, date of production and application instructions. It must be stored in dry conditions, protected from frost and excessive heat, and used as stated on the material packaging.

935 INSPECTION:
- All fabrications and assembled units must be carefully inspected for match with approved samples and for compliance with this specification and the final detailed drawings before dispatch to site.
- Give adequate notice of inspection arrangements to enable the CA and/or other affected parties to be present.

940 PROTECTION:
- All fabrications and assembled units must be protected against damage, corrosion and disfigurement during handling, installation and subsequent site operations.
- Protective coverings must be applied before dispatch to site and must not be detrimental to rainscreen cladding products, finishes or installation procedures.

950 SUITABILITY OF STRUCTURE:
- Not less than 2 weeks before commencement of brick tile cladding installation carries out a geometric survey of the supporting structure, checking line, level and fixing points. Report immediately to the CA if structure will not allow the required accuracy or security of erection.
- Coordinate geometric survey for brick tile cladding with any other survey(s) for adjacent cladding.
- Set out erection datum points, lines and levels for a complete elevation at a time unless otherwise agreed with the CA.

960 PRELIMINARY BRICK TILE CLADDING INSTALLATION/MOCK-UP PANEL: Complete a preliminary area of brick tile cladding as set out below for inspection and approval of appearance by the CA.

980 INTERFACES: Ensure that flashings, closers, etc. (specified in another section) are located correctly and neatly overlap the brick tile cladding to form a weather-tight junction.

985 DAMAGE:
- Do not repair brick tile cladding without approval. Such approval will not be given where products and units are badly damaged or where the proposed repair will impair performance or appearance.
- Repairs may require additional site testing at the discretion of the CA.
- Schedule repairs or record on drawings for inclusion in the maintenance manual

995 MAINTENANCE: Prepare a maintenance manual in accordance with CWCT ‘Guide to good practice for facades’, Section 10. Unless otherwise instructed or agreed the manual must be completed and handed over to the CA at Practical Completion.