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Agrément Certificate
15/5228
Product Sheet 2

WEBER.REND MT SYSTEMS

WEBER.REND MT SYSTEMS APPLIED TO SINIAT BLUCLAD BOARD

This Agrément Certificate Product Sheet⁽¹⁾ relates to weber.rend MT Systems, thin coat external renders applied to Siniat Bluclad Board for use as ventilated and drained exterior wall panel systems on timber-frame and steel-frame buildings.

(1) Hereinafter referred to as 'Certificate'.

CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.



KEY FACTORS ASSESSED

Weather resistance — the systems are suitable for external use on new or existing buildings in areas where the local wind-driven rain index is less than 100 litres per m² per spell (see section 6).

Strength and stability — the systems have adequate resistance to impact damage and cracking (see section 7).

Performance in relation to fire — the board has a Class A2-s1,d0 rating in accordance with EN 13501-1 and can be regarded as a non-combustible material. The external surfaces of the systems are unrestricted under the national Building Regulations (see section 9).

Durability — the systems, applied over the board, will perform satisfactorily for a period in excess of 30 years (see section 12).

The BBA has awarded this Certificate to the company named above for the systems described herein. These systems have been assessed by the BBA as being fit for their intended use provided they are installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

A handwritten signature in black ink, appearing to read 'John Albon'.

Date of First issue: 23 July 2015

John Albon — Head of Approvals
Construction Products

A handwritten signature in black ink, appearing to read 'Claire Curtis-Thomas'.

Claire Curtis-Thomas
Chief Executive

The BBA is a UKAS accredited certification body — Number 113. The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bbacerts.co.uk

Readers are advised to check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA direct.

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Regulations

In the opinion of the BBA, weber.rend MT Systems applied to Siniat Bluclad Board, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations (the presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):



The Building Regulations 2010 (England and Wales) (as amended)

Requirement:	B4(1)	External fire spread
Comment:		The systems can satisfy this Requirement. See section 9 of this Certificate.
Requirement:	C2(b)	Resistance to moisture
Comment:		Walls rendered with the systems can satisfy this Requirement. See section 6.1 of this Certificate.
Regulation:	7	Materials and workmanship
Comment:		The systems are acceptable. See sections 12.1 and 12.2 and the <i>Installation</i> part of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)(2)	Durability, workmanship and fitness of materials
Comment:		Use of the systems satisfies the requirements of this Regulation. See sections 11, 12.1 and 12.2 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards applicable to construction
Standard:	2.6	Spread to neighbouring buildings
Standard:	2.7	Spread on external walls
Comment:		The systems are classified as 'low risk' and are therefore unrestricted by these Standards, with reference to clauses 2.6.4 ⁽¹⁾⁽²⁾ , 2.6.5 ⁽¹⁾ , 2.6.6 ⁽²⁾ and 2.7.1 ⁽¹⁾⁽²⁾ . See section 9 of this Certificate.
Standard:	3.10	Precipitation
Comment:		Walls rendered with the systems can satisfy the requirements of this Standard, with reference to clauses 3.10.1 ⁽¹⁾⁽²⁾ , 3.10.2 ⁽¹⁾⁽²⁾ , 3.10.3 ⁽¹⁾⁽²⁾ and 3.10.5 ⁽¹⁾⁽²⁾ . See section 6.1 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The systems can contribute to meeting the relevant requirements of Regulation 9, Standards 1 to 6 and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard.
Regulation:	12	Building standards applicable to conversions
Comment:		All comments given for these systems under Regulation 9, Standards 1 to 6 also apply to this Regulation, with reference to clause 0.12.1 ⁽¹⁾⁽²⁾ and Schedule 6 ⁽¹⁾⁽²⁾ . (1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).



The Building Regulations (Northern Ireland) 2012 (as amended)

Regulation:	23(a)(b)(i)	Fitness of materials and workmanship
Comment:		The systems are acceptable. See sections 12.1 and 12.2 and the <i>Installation</i> part of this Certificate.
Regulation:	28(b)	Resistance to moisture and weather
Comment:		Walls rendered with the systems can satisfy this Regulation. See section 6.1 of this Certificate.
Regulation:	36(a)	External fire spread
Comment:		The systems can satisfy this Regulation. See section 9 of this Certificate.

Construction (Design and Management) Regulations 2015

Construction (Design and Management) Regulations (Northern Ireland) 2007

Information in this Certificate may assist the client, Principal Designer/CDM co-ordinator, designer and contractors to address their obligations under these Regulations.

See sections: 3 *Delivery and site handling* (3.1 and 3.2) and 11 *Maintenance* (11.3) of this Certificate.

Additional Information

NHBC Standards 2014

NHBC accepts the use of weber.rend MT Systems applied to Siniat Bluclad Board, provided they are installed, used and maintained in accordance with this Certificate, in relation to *NHBC Standards, Part 6 Substructure (excluding roofs)*, Chapter 6.2 *External timber framed walls*, and Part 6.10 *Light steel framed walls and floors*.

1 Description

1.1 weber.rend MT Systems applied to Siniat Bluclad Board are thin coat renders for use as ventilated and drained exterior wall panel systems on timber-frame and steel-frame buildings. The systems comprise:

- weber.rend LAC — a factory-batched, polymer-modified basecoat mortar, supplied as a powder, to which only clean water is added
- weber mesh — a 1 m wide, woven glassfibre reinforcing mesh with a polymer coating, with a nominal weight of 160 gm⁻²
- weber PR310 — a styrene acrylic, resin-based emulsion containing fine fillers, pigment and a coalescing agent used as a primer and pre-coat to control suction
- weber.plast TF — an acrylic-bonded textured render supplied in various grades as a paste containing aggregate (1.5 mm grain size). It is available in a range of colours, details of which can be obtained from the Certificate holder
- weber.sil TF — a silicone-bonded, textured render supplied as a paste containing aggregate of 1.5 mm maximum grain size. It is available in a range of colours, details of which can be obtained from the Certificate holder
- Siniat Bluclad Board — autoclaved medium-density cellulose fibre-reinforced calcium silicate board manufactured to meet the requirements of Category B, Class 2 of BS EN 12467 : 2012
- fixing screws — corrosion-resistant coated screws (4.2 by 45 mm – SQD – A2/304).

1.2 Siniat Bluclad Board has the characteristics of:

Width (mm)	1200
Thickness (mm)	10
Approximate mass per unit area (kg·m ⁻²)	12
Approximate dry density (kg·m ⁻³)	1180
Modulus of Rupture (MPa)	>10.

1.3 Ancillary items used with the systems but outside the scope of this Certificate are:

- mesh wing corner, base stop, corner, horizontal drip and movement beads.

2 Manufacture

2.1 The render components are manufactured in a batch blending process. The board is manufactured from a cement mixture, reinforced with cellulose fibres by the Hatschek process with a smooth finish on one face and a textured finish on the other to provide a key for thin-coat polymeric renders.

2.2 As part of the assessment and ongoing surveillance of product quality, the BBA has:

- agreed with the manufacturer the quality control procedures and product testing to be undertaken
- assessed and agreed the quality control operated over batches of incoming materials
- monitored the production process and verified that it is in accordance with the documented process
- evaluated the process for management of nonconformities
- checked that equipment has been properly tested and calibrated
- undertaken to carry out the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

2.3 The management system of Weber has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2008 by NQA (Certificate FM01209).

3 Delivery and site handling

3.1 The render components are delivered on pallets in moisture-resistant bags/containers and plastic pails. The boards are delivered to site shrink-wrapped in polythene packs.

3.2 All other components are delivered to site in the quantities and packages as listed in Table 1. Each package carries the manufacturer's and product's identification, batch number, and the BBA logo, incorporating the number of this Certificate.

Table 1 Component supply details

Component	Quantity and package
weber.rend LAC	20 kg bag
weber PR310	10 litre container
weber.plast TF	15 kg plastic pail
weber.sil TF	15 kg plastic pail

3.3 weber mesh, one metre wide, is supplied in rolls of 50 m length.

3.4 Powder mortars should be stored in dry conditions, off the ground and protected from frost at all times.

3.5 The primer and textured synthetic coatings should be stored in a safe area, under cover and protected from excessive heat and frost at all times.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on weber.rend MT Systems applied to Siniat Bluclad Board.

Design Considerations

4 Use

4.1 weber.rend MT Systems applied to Siniat Bluclad Board are satisfactory for use as ventilated exterior wall panel systems on timber-frame and steel-frame buildings.

4.2 New buildings subject to national Building Regulations should be constructed in accordance with the relevant recommendations of:

- BS EN 1996-2 : 2006 and its UK National Annex — the designer should select a construction appropriate to the local wind-driven rain index, paying due regard to the design detailing, workmanship and materials to be used
- BS EN 13914-1 : 2005
- BS 8000-3 : 2001.

4.3 It is essential that all new walls are designed and constructed to prevent moisture penetration and the formation of condensation.

4.4 The design should include:

- a ventilated and drained cavity in accordance with BS 5250 : 2011 to ensure that the timber-frame structure is protected from moisture from wind-driven rain in the event of unexpected failure of the cladding envelope, and the inclusion of insect guards to all ventilation openings
- effective detailing around all openings to ensure weathertightness of the structure
- an effective vapour control layer on the internal face of the cavity to ensure that the frame structure is protected.

4.5 The installation of the system is restricted to above damp-proof course level and a minimum of 150 mm above ground level.

5 Practicability of installation

The systems are designed to be installed by render applicators/cladding contractors experienced with this type of system.

6 Weather resistance



6.1 The systems are for use in areas where the local wind-driven rain spell index is less than 100 litres per m² per spell calculated in accordance with BS 8104 : 1992 and where traditional renders are normally specified.

6.2 The Bluclad Boards to which the render is applied must be designed and constructed in relation to local exposure conditions to minimise the incidence of rain penetration.

6.3 The renders will tend to shed water and will considerably reduce the amount of water absorbed during rain.

7 Strength and stability

7.1 Siniat Bluclad Board has adequate strength and can be incorporated in an external cladding system suitably designed to resist wind loads normally experienced in the UK.

7.2 A suitably-qualified chartered engineer must check the design and installation of the cladding.

7.3 The sub-frame and the support rails should be designed to limit mid-span deflections to L/200, and cantilever deflections to L/150. Board mid-span deflections should be limited to L/500.

7.4 The supporting wall must be able to take the full wind loading as well as any racking loads. The cladding system cannot be assumed to contribute in this respect.

7.5 Wind loads should be calculated in accordance with BS EN 1991-1-4 : 2005 and its UK National Annex. The higher-pressure coefficients applicable to corners of buildings should be used.

7.6 The maximum allowable pull-out value of the fixing to be used for securing the board to the sub-frame should be determined by tests using a minimum safety factor of 3 on the characteristic failure load.

7.7 The maximum allowable pull-through values for the stainless steel screws is 0.39 kN.

7.8 For design purposes, the board may be assumed to have the following mechanical properties:

flexural modulus 10,000 N·mm⁻²

7.9 When tested for impact, the renders, applied on Siniat Bluclad boards supported at 400 mm batten centres, were found to adequately resist 'soft body' impact energy of 100 N·m and 'hard body' impact energy of 10 N·m. The systems may therefore be considered suitable for use in location categories B to F, as shown in Table 2.

Table 2 Location categories

Category	Description	Examples	
A	Readily accessible to public and others with little incentive to exercise care. Prone to vandalism and abnormally rough use	External walls of housing and public buildings in vandal prone areas	} Zone of wall up to 1.5 m above pedestrian or floor level
B	Readily accessible to public and others with little incentive to exercise care. Chances of accident occurring and of misuse	Walls adjacent to pedestrian thoroughfares or playing fields when not in category A	
C	Accessible mainly to those with some incentive to exercise care. Some chance of accident occurring and of misuse	Walls adjacent to private open gardens. Back walls of balconies	
D	Only accessible, but not near a common route, to those with high incentive to exercise care. Small chance of accident occurring or of misuse	Walls adjacent to small fenced decorative gardens with no through paths	
E	Above zone of normal impacts from people but liable to impacts from thrown or kicked objects	1.5 m to 6 m above pedestrian or floor level in public areas	
F	Above zone of normal impacts from people but not liable to impacts from thrown or kicked objects	Wall surfaces of high positions than those defined in E above	

7.10 It is essential that the surface of the boards to be covered is clean and has a sound mechanical key to ensure a satisfactory bond between the substrate and the render.

8 Water vapour permeability

The render systems with the finishes weber.plast TF and weber.sil TF have equivalent air thickness s_d (m) values of 0.93 and 0.57 respectively.

9 Performance in relation to fire



9.1 Siniat Bluclad Board has an A2-s1,d0 rating when classified in accordance with EN 13501-1 : 2007 and can be regarded as a 'non-combustible' material as defined in the various national Building Regulations.

9.2 The external surfaces of the systems are classified as Class O or 'low risk'.

9.3 The systems are unrestricted as defined in the documents supporting the national Building Regulations.

9.4 For resistance to fire, the performance of a wall incorporating the systems can only be determined by tests from a suitably-accredited laboratory and is not covered by this Certificate.

9.5 Cavity barriers should be incorporated behind the cladding as required under the national Building Regulations, but should not block essential ventilation pathways. Guidance on fire barriers can be found in BRE 135 : 2003 *Fire Performance of External Insulation For Walls of Multi-Storey Buildings*.

10 Proximity of flues

When installing the system in close proximity to certain flue pipes, the following provisions of the national Building Regulations should be met:

England and Wales — Approved Document J

Scotland — Mandatory Standard 3.19, clauses 3.19.1⁽¹⁾⁽²⁾ to 3.19.4⁽¹⁾⁽²⁾ and 3.19.8⁽¹⁾⁽²⁾

Northern Ireland — Technical Booklet L.

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).

11 Maintenance



11.1 Regular maintenance checks should be carried out on architectural details and on external plumbing and fittings, to ensure that they are functioning correctly and to prevent water damage to the render.

11.2 Damaged render must be repaired as soon as is practicable (see section 14).

11.3 Damaged boards should be repaired or replaced as soon as practicable, following the Certificate holder's instructions and observing all necessary health and safety regulations.

12 Durability



12.1 The durability and service life of the systems will depend upon the building location, the immediate environment and the intended use of the building.

12.2 Provided regular maintenance is carried out, as described in section 11 and in accordance with the Certificate holder's instructions, the render systems will perform satisfactorily for a period in excess of 30 years when used in the normal climatic conditions found in the UK.

12.3 The systems may become discoloured with time, the rate depending on the local environment. Appearance can normally be restored by cleaning with water and mild detergent. In industrial atmospheres light colours should be avoided.

Installation

13 General

13.1 Advice concerning site survey and preliminary work is available to the designer or rendering contractor from the Certificate holder.

13.2 A pre-application survey of the property must be carried out to determine the suitability of the substrate to receive the systems and whether repairs to the building structure are necessary before application. A specification is prepared by the designer or rendering contractor for each elevation indicating:

- preliminary treatment of the background
- position of beads
- detailing around windows, doors and at eaves
- areas where flexible sealants must be used.

13.3 The sub-frame to which the cladding is fixed must be structurally sound and constructed in accordance with the requirements of the relevant national Building Regulations and Standards (see sections 13.4 and 13.5).

13.4 Timber stud walls and timber support work must be structurally sound, designed and constructed in accordance with BS EN 1995-1-1 : 2004, and preservative treated in accordance with BS EN 351-1 : 2007 and BS 8417 : 2011.

13.5 Galvanized steel framework must be structurally sound, designed and constructed in accordance with BS EN 1993-1-3 : 2006.

13.6 The systems are capable of transmitting their self-weight and wind load to the structure. The adequacy of fixing of the sub-frame to the structural frame for specific installations is outside the scope of this Certificate and must be verified by a suitably qualified engineer. Particular care is required around window and door openings to ensure that the structure is capable of sustaining the additional weight of the Siniat Bluclad boards.

13.7 Horizontal movement joints must be provided at every floor to accommodate vertical shrinkage of up to 6 mm in the timber frame and to follow movement joints in the substructure. For steel-frame structures, reference should be made to the Structural Engineer's details for detection at floor level and movement joints in the substructure.

13.8 Vertical movement joints should be provided at the required intervals. The actual spacing and position of the joints will be determined by the shape of the area to be rendered and should coincide with movement joints in the structure and allow for the same degree of movement.

13.9 When a breather membrane is required, it must be installed and properly overlapped in accordance with the instructions of the membrane manufacturer and the building designer.

13.10 All window and door openings are sealed strictly in accordance with the Certificate holder's installation instructions to ensure that they are weathertight before application of the systems.

13.11 The renders should not be applied in rain or mist, at temperatures above 30°C or below 5°C, or if exposure to frost is likely to occur during curing.

13.12 In sunny weather, work should commence on the shady side of the building, following the sun round to prevent the rendering drying out too rapidly.

13.13 To minimise colour shade variations and to avoid dry line jointing, continuous surfaces should be completed without a break. If breaks cannot be avoided they should be made where services or architectural features, such as reveals or lines of doors and windows, help mask cold joints. Where long, uninterrupted runs are planned, bags of the product from the same batch should be used. Sacks with different batch numbers should be checked for colour consistency.

14 Procedure

14.1 Application of weber.rend MT Systems to Siniat Bluclad board should be carried out strictly in accordance with the Certificate holder's instructions and specifications, and the relevant recommendations of BS EN 13914-1 : 2005.

14.2 The boards should be securely fixed to the framework at the recommended spacings as per the manufacturer's instructions, providing a rigid in-plane surface without deflection or edge protrusions.

14.3 Render beads and expansion beads are fixed in accordance with the Certificate holder's instructions.

14.4 weber.rend LAC is mixed using clean water (5 litres of water per 20 kg bag of render) to achieve a thick creamy consistency, and a 3 mm thick layer is applied onto the board.

14.5 weber mesh is laid in the first pass of weber.rend LAC and left to dry for approximately 30 minutes before application of a second pass of 2–3 mm minimum, to achieve a minimum total thickness of 6 mm. Using a sponge the surface is rubbed to achieve a float finish and the render allowed to dry for 3–7 days.

14.6 A coat of weber PR310 (coverage rate is 0.25 litres per m²) is applied by roller and the surface left to dry for 24 hours prior to application of the finish coats.

14.7 A finishing coat of either weber.plast TF at a coverage rate 2.8 kg·m⁻² or weber.sil TF at a coverage rate 2.7 kg·m⁻² is applied to a thickness of 1.5 mm using a steel float and hawk. A thin plastic float is used to smooth the surface ensuring evenness of cover.

Technical Investigations

15 Tests

15.1 Tests were carried out on weber.MT Systems applied to Siniat Bluclad Board and the results assessed to determine:

- effect of thermal cycling
- effect of freeze/thaw
- effect of accelerated ageing on impact resistance
- effect of accelerated ageing on bond strength.

15.2 Existing data to BS EN 12467 : 2014 for Siniat Bluclad Board were assessed to determine:

- dimensions
- density
- straightness and squareness
- water impermeability
- bending strength
- heat/rain cycling
- effect of freeze/thaw cycling
- effect of soak/dry cycling
- effect of warm water immersion.

16 Investigations

16.1 Installations were witnessed to assess the practicability of the render applications to Siniat Bluclad boards.

16.2 The manufacturing process was evaluated, including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

Bibliography

BS 5250 : 2011 *Code of practice for control of condensation in buildings*

BS 8000-3 : 2001 *Workmanship on building sites — Code of practice for masonry*

BS 8104 : 1992 *Code of practice for assessing exposure of walls to wind-driven rain*

BS 8417 : 2011 *Preservation of wood — Code of practice*

BS EN 351-1 : 2007 *Durability of wood and wood-based products — Preservative-treated solid wood — Classification of preservative penetration and retention*

BS EN 1991-1-4 : 2005 *Eurocode 1: Actions on structures — General actions — Wind actions*

NA to BS EN 1991-1-4 : 2005 UK National Annex to *Eurocode 1: Actions on structures — General actions — Wind actions*

BS EN 1993-1-3 : 2006 *Eurocode 3: Design of steel structures — General rules — Supplementary rules for cold-formed members and sheeting*

BS EN 1995-1-1 : 2004 *Eurocode 5: Design of timber structures — General — Common rules and rules for buildings*

BS EN 1996-2 : 2006 *Eurocode 6: Design of masonry structures — Design considerations, selection of materials and execution of masonry*

NA to BS EN 1996-2 : 2006 UK National Annex to *Eurocode 6: Design of masonry structures — Design considerations, selection of materials and execution of masonry*

Conditions of Certification

17 Conditions

17.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is issued only to the company, firm, organisation or person named on the front page — no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
- is valid only within the UK
- has to be read, considered and used as a whole document — it may be misleading and will be incomplete to be selective
- is copyright of the BBA
- is subject to English Law.

17.2 Publications, documents, specifications, legislation, regulations, standards and the like referenced in this Certificate are those that were current and/or deemed relevant by the BBA at the date of issue or reissue of this Certificate.

17.3 This Certificate will remain valid for an unlimited period provided that the product/system and its manufacture and/or fabrication, including all related and relevant parts and processes thereof:

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
- continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine
- are reviewed by the BBA as and when it considers appropriate.

17.4 The BBA has used due skill, care and diligence in preparing this Certificate, but no warranty is provided.

17.5 In issuing this Certificate, the BBA is not responsible and is excluded from any liability to any company, firm, organisation or person, for any matters arising directly or indirectly from:

- the presence or absence of any patent, intellectual property or similar rights subsisting in the product/system or any other product/system
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product/system
- actual installations of the product/system, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product/system is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product/system, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to CE marking.

17.6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product/system which is contained or referred to in this Certificate is the minimum required to be met when the product/system is manufactured, supplied, installed, used, maintained and removed. It does not purport in any way to restate the requirements of the Health and Safety at Work etc. Act 1974, or of any other statutory, common law or other duty which may exist at the date of issue or reissue of this Certificate; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any statutory, common law or other duty of care.