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BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

Designated by Government to issue European Technical Approvals

Agrément Certificate No 91/2600
*Second issue**

WEBER.THERM XL EXTERNAL WALL INSULATION SYSTEMS

Système d'isolation pour murs extérieurs
Wärmedämmung für Außen-wand

Product

- *THIS CERTIFICATE RELATES TO WEBER.THERM XL EXTERNAL WALL INSULATION SYSTEMS.*
- *The systems comprise insulation material with mechanical fixings, reinforced undercoat and decorative render finishes as described in the accompanying Detail Sheets.*
- *The systems are applied to the outside of external walls of masonry, dense or no-fines concrete construction and are suitable for use on new or existing buildings.*

continued

Regulations — Detail Sheet 1

1 The Building Regulations 2000 (as amended) (England and Wales)

The Secretary of State has agreed with the British Board of Agrément the aspects of performance to be used by the BBA in assessing the compliance of external wall insulation systems with the Building Regulations. In the opinion of the BBA, weber.therm XL External Wall Insulation Systems, if used in accordance with the provisions of this Certificate, will meet or contribute to meeting the relevant requirements.

Requirement:	**B4(1)**	External fire spread
Comment:		The systems are classified Class 0 surface and therefore can meet this Requirement. See the relevant tinted areas (8.2, 8.3 and 8.6) in the *Properties in relation to fire* section of these Front Sheets.
Requirement:	**C2(b)(c)**	Resistance to moisture
Comment:		Walls insulated with the systems can meet this Requirement. See the relevant tinted area (6.4) in the *General* section and the tinted areas in the *Risk of condensation* section of these Front Sheets.
Requirement:	**L1(a)(i)**	Dwellings
Requirement:	**L2(a)**	Buildings other than dwellings
Comment:		The systems will enable, or contribute to enabling, a wall to meet the U value requirement. See the tinted areas in the *Thermal insulation* section of the accompanying Detail Sheets.
Requirement:	**Regulation 7**	Materials and workmanship
Comment:		The systems are acceptable. See the tinted area in the *Durability* section of these Front Sheets.

continued

• *Application and maintenance must be carried out strictly in accordance with the* Design Data *and* Installation *parts of the Detail Sheets and the marketing company's instructions by operatives trained and approved by the Certificate holder.*

• *All materials and components for use in the systems are approved by the BBA and must be obtained from the Certificate holder.*

These Front Sheets must be read in conjunction with the relevant accompanying Detail Sheets, which provide information specific to insulation systems.

2 The Building (Scotland) Regulations 2004

In the opinion of the BBA, weber.therm XL External Wall Insulation Systems, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Regulations and related Mandatory Standards as listed below.

Regulation:	**8**	**Fitness and durability of materials and workmanship**
Regulation:	8(1)	Fitness and durability of materials and workmanship
Comment:		The systems can contribute to a construction satisfying this Regulation. See the tinted area in the *Durability* section and the *Installation* part of these Front Sheets.
Regulation:	8(2)	Fitness and durability of materials and workmanship
Comment:		The systems can contribute to a construction satisfying this Regulation. See the tinted area in the *Maintenance* section of these Front Sheets.
Regulation:	**9**	**Building standards — construction**
Standard:	2.6	Spread to neighbouring buildings
Comment:		The systems have a 'low risk' surface classification. The systems incorporate insulation which would not be classed as 'non-combustible', therefore completed walls would be regarded as unprotected areas as defined in clause 2.6.4[1][2]. However, in the opinion of the BBA it would not be unreasonable to seek a relaxation of this clause. See also the relevant tinted areas (8.2, 8.5 and 8.6) in the *Properties in relation the fire section* of these Front Sheets. NOTE: The system, described in section 8.5 of these Front Sheets, would be classed as 'non-combustible'.
Standard:	2.7	Spread on external walls
Comment:		The systems incorporate insulation which would be classed as 'combustible' and, therefore should be used on walls more than one metre from a boundary [reference clause 2.7.1[1][2]]. See the relevant tinted area (8.2) in the *Properties in relation to fire* section of these Front Sheets.
Standard:	3.10	Precipitation
Comment:		Walls insulated with the systems can satisfy this Standard, with reference to clauses 3.10.2[1][2] and 3.10.3[1][2]. See the relevant tinted area (6.4) in the *General* section of these Front Sheets.
Standard:	3.15	Condensation
Comment:		Walls insulated with the systems can satisfy this Standard, with reference to clauses 3.15.3[1] and 3.15.4[1]. See the relevant tinted area (6.7) in the *General* section and the tinted areas in the *Risk of condensation* section of these Front Sheets.
Standard:	6.2	Building insulation envelope
Comment:		The systems will enable or contribute to enabling a wall to satisfy this Standard, with reference to clauses 6.2.1[1][2], 6.2.4[1][2] and 6.2.5[1][2]. See the tinted areas in the *Thermal insulation* section of the accompanying Detail Sheets.

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).

3 The Building Regulations (Northern Ireland) 2000

In the opinion of the BBA, weber.therm XL External Wall Insulation Systems, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Building Regulations as listed below.

Regulation:	B2	Fitness of materials and workmanship
Comment:		The systems are acceptable. See the tinted area in the *Durability* section of these Front Sheets.
Regulation:	C4	Resistance to ground moisture and weather
Comment:		Walls insulated with the systems can satisfy this Regulation. See the relevant tinted area (6.4) in the *General* section of these Front Sheets.
Regulation:	C5	Condensation
Comment:		Walls insulated with the systems will satisfy the requirements of this Regulation. See the relevant tinted area (6.7) in the *General* section and the tinted areas in the *Risk of condensation* section of these Front Sheets.
Regulation:	E5	External fire spread
Comment:		The systems have a Class 0 surface and can satisfy this Regulation. See the relevant tinted areas (8.2 and 8.6) in the *Properties in relation to fire* section of these Front Sheets.
Regulation:	F2	Building fabric
Comment:		The systems will enable, or contribute to enabling, a wall to meet this Regulation. See the tinted areas in the *Thermal insulation* section of the accompanying Detail Sheets.

4 Construction (Design and Management) Regulations 1994 (as amended)

Construction (Design and Management) Regulations (Northern Ireland) 1995 (as amended)

Information in this Certificate may assist the client, planning supervisor, designer and contractors to address their obligations under these Regulations.

See section: *5 Delivery and site storage* (5.5) of these Front Sheets.

Technical Specification

5 Delivery and site storage

5.1 The insulation is delivered to site shrink-wrapped in polythene packs. Each pack carries the manufacturer's and product identification marks and batch numbers.

5.2 Components are delivered to site in the quantities and containers as listed in Table 1. Each container carries the product's identification, manufacturer's batch number, and the BBA logo, incorporating the number of this Certificate.

Table 1 Component supply details

Component	Quantity and container
weber.rend PUC	25 kg bag
weber.rend TUC	25 kg bag
weber.rend MFU	25 kg bag
weber.rend PTC	25 kg bag
weber.rend TTC	25 kg bag
weber.plast P	10 litres
Dry-Dash aggregate	25 kg bag
weber PR310	10 litre container
weber.plast TF/weber.plast DF	15 kg plastic pail
weber.sil TF	20 kg plastic pail
Mechanical fixings	boxed by manufacturer
Base, stop, corner, horizontal drip and movement beads	2.5 m or 3 m lengths

5.3 The weber metal lathing is supplied in sheets measuring 2440 mm by 1220 mm with a choice of galvanized (uncoated), ferritic stainless or austenitic stainless steel finish.

5.4 The insulation should be stored on a firm, clean, level base, off the ground and must be protected from prolonged exposure to sunlight either by storing opened packs under cover in dry conditions or re-covering with opaque polythene sheeting.

5.5 Care must be taken when handling the insulation boards to avoid both damage and contact with solvents or bitumen products. The boards must not be exposed to open flame or other ignition sources.

5.6 The powder mortars should be stored in dry conditions, off the ground, and be protected from excessive heat and frost at all times.

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

Design Data

6 General

6.1 weber.therm XL External Wall Insulation Systems, when installed in accordance with this Certificate, are effective in reducing the thermal transmittance (U value) of the walls of new and existing buildings. It is essential that the detailing techniques specified in this Certificate are carried out to a high standard, if the ingress of water into the insulation is to be avoided and the full thermal benefit obtained from treatment with the systems.

6.2 The systems will improve the weather resistance of a wall and provide a decorative finish. However, they may be installed only where other routes for moisture penetration have been dealt with separately and where there are no signs of dampness on the inner surface of the wall, other than those caused solely by condensation. The systems can be used to overcome condensation associated with the internal wall surface.

6.3 Existing buildings subject to national Building Regulations should have wall surfaces in accordance with the *Site survey and preliminary work* section of these Front Sheets and the relevant sections in the accompanying Detail Sheets.

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

- BS 5628-3 : 2001. In particular Clause 5.5.2 *Rain penetration*, of the Code of Practice should be followed in that 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 8000-3 : 2001.

6.5 Other new buildings, not subject to any of the previous requirements, should also be built in accordance with BS 5628-3 : 2001.

6.6 The following general recommendations are made for the use of the three alternative weber metal lathing materials to minimise the risk of corrosion:

- galvanized mild steel strip BS EN 10327 : 2004 (Fe PO2 G Z 450 NA-U) — buildings positioned a minimum distance of 16 km (10 miles) from the coast:
  - up to five storeys in sheltered areas or two storeys in areas of moderate exposure;
- ferritic stainless grade 430S — buildings up to five storeys in areas of severe exposure or coastal areas with moderate rainfall
- austenitic stainless grade 304S — buildings over five storeys in areas of severe exposure or coastal areas with high atmospheric salt concentration.

6.7 When using the system, consideration must be given to the overall design to minimise the risk of condensation and the recommendations of BS 5250 : 2002 should be followed.

7 Strength and stability

7.1 The systems have adequate resistance to impact and abrasion where walls are exposed and have some protection, eg walls of private dwellings and walls of communal dwellings above ground-floor level. Where the system may be exposed to severe mechanical or malicious impact, eg walls of public buildings at ground-floor level, precautions may be required to reduce the risk of damage. Guidance may be obtained from the Certificate holder and BRE Current Paper CP 6 : 81 *Assessment of external walls — Hard Body Impact Resistance*.

7.2 The systems, as specified in the Detail Sheets, can be designed to withstand the thermal stresses and wind pressures (including suction) normally experienced in the United Kingdom. The systems can also be designed in accordance with BS 6399-2 : 1997 to withstand the increased wind loads associated with tall buildings (greater than 12 m) and areas of high exposure. This may require the use of additional weber mechanical fixings per unit area, or for the fixings to be of stainless steel at a rate per unit area sufficient to withstand the building's expected wind loading (see sections 13.2 to 13.4).

8 Properties in relation to fire

8.1 In the opinion of the BBA, the use of the systems will not introduce any additional hazard in respect of behaviour in fire when compared with a systems using traditional sand/cement render finishes.

8.2 The external surfaces of the systems are classified as Class 0 or 'low risk' as defined in the documents supporting the national Building Regulations. The systems may therefore be used in accordance with the provisions of:

England and Wales

Approved Document B, paragraph 13.5

Scotland

Mandatory Standards 2.6 and 2.7

Northern Ireland

Technical Booklet E, paragraph 4.3.

8.3 To limit the risk of fire spread between floors in buildings subject to the Building Regulations in England and Wales, fire barriers should be installed at each floor level above the first floor level (ie starting with the second storey).

8.4 In buildings not subject to the England and Wales Building Regulations (ie Scotland or Northern Ireland), it is recommended that designers should consider the use of the guidance given in section 8.3.

8.5 weber.therm XL (MFS) (see Detail Sheet 3) will be non-combustible when finished with weber.rend TTC with dry dash or weber.rend TTS with scraped texture finish.

8.6 With regard to fire stopping of cavities and limitations on the use of combustible materials, walls must comply with the following provisions:

England and Wales

Approved Document B, Section 10, paragraphs 13.5 and 13.7

Scotland

Mandatory Standards 2.6 and 2.7

Northern Ireland

Technical Booklet E, paragraphs 3.27 to 3.33 and Section 4.

9 Proximity of flues

When the systems are installed in close proximity to certain flue pipes, the relevant provisions of the national Building Regulations should be met:

England and Wales

Approved Document J

Scotland

Mandatory Standard 3.19 (clause 3.19.4)

Northern Ireland

Technical Booklet L.

10 Moisture penetration

10.1 The systems can be installed on walls that are designed and constructed to prevent moisture ingress from the ground coming into contact with the insulation.

10.2 Walls incorporating the systems are acceptable in accordance with the relevant details listed below:

England and Wales

Approved Document C, Technical Solutions 5.5 to 5.14

Scotland

Mandatory Standards 3.4 and 3.10

Northern Ireland

Technical Booklet C, Sections 1.6 and 2.2, 2.4 and 2.5.

10.3 The assessment has shown that the systems will resist the passage of moisture into the wall system and substrate.

11 Risk of condensation

11.1 Walls will adequately limit the risk of surface condensation when the thermal transmittance (U value) does not exceed 0.7 $Wm^{-2}K^{-1}$ at any point and the junctions with walls are designed in accordance with the relevant requirements of *Limiting thermal bridging and air leakage : Robust construction details for dwellings and similar buildings* TSO 2002 or BRE Information Paper IP 17/01 *Assessing the effects of thermal bridging at junctions and around openings*.

11.2 If a system is to be used on the external walls of rooms expected to have continuous high humidities, care must be taken in the design of the rooms to avoid possible problems from the formation of interstitial condensation in the wall.

11.3 The relevant components of the systems have a water vapour resistance such that, under the conditions likely to be found in dwellings in the United Kingdom, interstitial condensation should not occur within the insulation. Assessment of individual projects can be carried out in accordance with BS 5250 : 2002, Section 8.3 and Appendix D.

12 Maintenance

12.1 Regular checks should be made on the installed system, particularly at joints and on external plumbing fitments, to ensure that ingress of water does not occur. Necessary repairs should be effected immediately by approved applicators of the systems.

12.2 Damaged areas must be repaired using the appropriate components and procedures detailed in the Certificate holder's instructions.

13 Durability

13.1 The results of accelerated ageing tests in accordance with MOAT No 22 : 1988 indicate that the system is durable. The system should remain effective for at least 30 years, provided any damage to the surface finish is repaired immediately, and regular maintenance is undertaken including checks on joints in the system and on external plumbing fitments to prevent leakage of rainwater into the system, enabling steps to be taken to correct the defects.

13.2 The dry-dash finish will break up the flow of water on the surface and reduce the risk of discoloration by water runs. The finish may become discoloured with time, the rate depending on locality, initial colour, the degree of exposure and atmospheric pollution, as well as the design and detailing of the wall. In common with traditional renders, discoloration by algae and lichens may occur in wet areas.

13.3 Render containing Portland cement may be subject to lime bloom. The occurrence of this may be reduced by avoiding application in adverse weather conditions. The effect is transient and is less noticeable on lighter colours.

13.4 The textured finishes may also become soiled in time, the rate depending on the locality. The appearance may be restored by a suitable powerwash or, if required, by the application of a compatible paint; however, great care should be taken not to adversely affect the water vapour transmission or fire characteristics of the system. The advice of the Certificate holder should be sought.

Installation

14 Site survey and preliminary work

14.1 A pre-installation survey of the property is carried out to determine suitability for treatment and any repairs necessary to the building structure before application of a system.

14.2 A specification is prepared for each elevation of the building indicating:

- where required, additional reinforcement
- the position of beads
- detailing around windows, doors and at eaves
- dpc level
- exact position of expansion joints
- areas where flexible sealants must be used
- any alterations to external plumbing
- where required, the position of fire barriers.

14.3 The survey should include tests conducted on the walls of the building by the Certificate holder or the approved suppliers, to determine the pull-out resistance of the proposed mechanical fixings. A chartered structural engineer or similarly competent person with experience of fixings, should carry out an assessment and recommend the type and number of fixings required to withstand the building's expected wind loading based on calculations using the test data, the relevant wind speed data for the site and, in the absence of a formal requirement, a safety factor of 3 should be used.

14.4 All modifications, such as provision for cavity barriers and fire stopping (see sections 8.7 and

8.8) and necessary repairs to the building are completed before installation commences.

14.5 All necessary repairs to the building structure are completed before installation of the system is started.

14.6 Surfaces should be sound, clean and free from loose material. The flatness of surfaces must be checked; this may be achieved using a straight edge spanning the storey height. Any excessive irregularities, ie greater than 10 mm or 20 mm in 1 metre, must be made good prior to installation to ensure that the insulation is installed with a smooth, in-plane finished surface.

14.7 Where surfaces are covered with an existing rendering it is essential that the bond between the background and the render is adequate. All loose areas should be hacked off and reinstated.

14.8 On existing buildings, purpose-made window-sills must be fitted to extend beyond the finished face of the system. New buildings should incorporate suitably deep sills.

14.9 It is recommended that external plumbing be removed before installation and alterations made to underground drainage, where appropriate, to accommodate repositioning of the plumbing on the finished face of the systems.

14.10 New buildings should be of sound masonry, or concrete construction.

14.11 Internal wet work, eg screeding or plastering, should be completed and allowed to dry prior to the application of a system.

15 Approved installers

Application of the systems, within the context of this Certificate, is carried out by approved installers. An approved installer is a company which:

- is employing operatives who have been trained and approved by the Certificate holder to install the systems and who have been issued with appropriate training cards by the Certificate holder
- has undertaken to comply with the Certificate holder's application procedure, which contains the requirement for each application team to include at least one member with a training card, and
- is monitored and subject to supervision by the Certificate holder. This may include unannounced site inspections.

Bibliography

BS 5250 : 2002 *Code of practice for control of condensation in buildings*

BS 5628-3 : 2001 *Code of practice for use of masonry — Materials and components, design and workmanship*

BS 6399-2 : 1997 *Loading for buildings — Code of practice for wind loads*

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

BS EN 10327 : 2004 *Continuously hot-dip coated strip and sheet of low carbon steels for cold forming — Technical delivery conditions*

MOAT No 22 : 1988 *UEAtc Directives for the Assessment of External Insulation Systems for Walls (Expanded Polystyrene Insulation Faced with a Thin Rendering)*

Conditions of Certification

16 Conditions

16.1 This Certificate:

(a) relates only to the product that is named, described, installed, used and maintained as set out in this Certificate;

(b) is granted only to the company, firm or person identified on the front cover — no other company, firm or person may hold or claim any entitlement to this Certificate;

(c) is valid only within the UK;

(d) has to be read, considered and used as a whole document — it may be misleading and will be incomplete to be selective;

(e) is copyright of the BBA;

(f) is subject to English law.

16.2 References in this Certificate to any Act of Parliament, Regulation made thereunder, Directive or Regulation of the European Union, Statutory Instrument, Code of Practice, British Standard, manufacturers' instructions or similar publication, are references to such publication in the form in which it was current at the date of this Certificate.

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

(a) are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA;

(b) continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine; and

(c) are reviewed by the BBA as and when it considers appropriate.

16.4 In granting this Certificate, the BBA is not responsible for:

(a) the presence or absence of any patent, intellectual property or similar rights subsisting in the product or any other product;

(b) the right of the Certificate holder to market, supply, install or maintain the product; and

(c) the actual works in which the product is installed, used and maintained, including the nature, design, methods and workmanship of such works.

16.5 Any recommendations relating to the use or installation of this product which are contained or referred to in this Certificate are the minimum standards required to be met when the product is used. They do not purport in any way to restate the requirements of the Health & Safety at Work etc Act 1974, or of any other statutory, common law or other duty which may exist at the date of this Certificate or in the future; nor is conformity with such recommendations to be taken as satisfying the requirements of the 1974 Act or of any present or future statutory, common law or other duty of care. In granting this Certificate, the BBA does not accept responsibility to any person or body for any loss or damage, including personal injury, arising as a direct or indirect result of the installation and use of this product.

BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

In the opinion of the British Board of Agrément, weber.therm XL External Wall Insulation Systems are fit for their intended use provided they are installed, used and maintained as set out in this Certificate. Certificate No 91/2600 is accordingly awarded to weber building solutions.

On behalf of the British Board of Agrément

Date of Second issue: 15th July 2005

Chief Executive

**Original Certificate issued on 15th August 1991. This amended version includes a change of Certificate holder's name, reference to the revised Building and CDM Regulations, new component names and new* Conditions of Certification.

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