

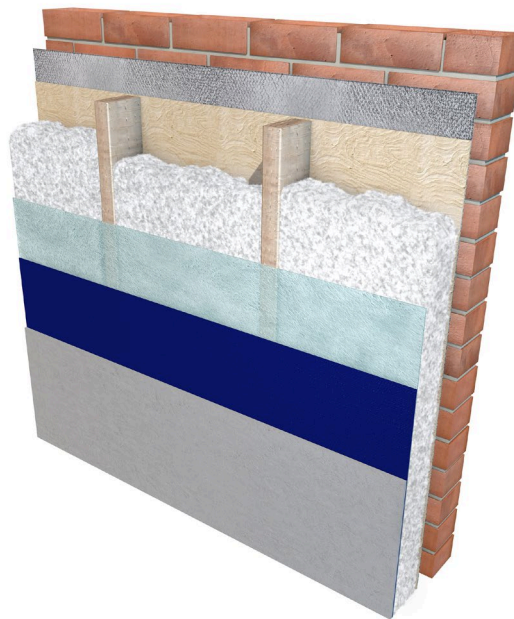
SCOPE OF AGRÉMENT

This BDA Agrément® (hereinafter 'Agrément') relates to Supafil® Frame and Supafil® MAX Frame 033 (hereinafter the 'System'), a glass mineral wool fibre material blown in a loose form, for use in external wall constructions. The System is blown through a polypropylene veil (hereinafter 'veil') which creates a temporary cavity in the inner leaf of the sheathed timber-framed walls with outer masonry leaf (where masonry includes clay and calcium silicate bricks, concrete blocks, and natural and reconstituted stone block). The System is for use in existing and new residential and non-residential buildings.

DESCRIPTION

The System consists of unbonded glass mineral wool fibres, blown through a translucent veil in-between timber studs, until the cavity is fully filled, and the required density is achieved.

ILLUSTRATION



THIRD-PARTY ACCEPTANCE

None requested by the Agrément holder.

STATEMENT

It is the opinion of Kiwa Ltd. that the System is safe and fit for its intended use, provided it is specified, installed and used in accordance with this Agrément.

Craig Devine
Operations Manager, Building Products



Alpeo Mlotha CEng FIMMM MBA
Business Unit Manager, Building Products



SUMMARY OF AGRÉMENT

This document provides independent information to specifiers, specialists, engineers, building control personnel, contractors, installers and other construction industry professionals who are considering the safety and fitness for purpose of the System. This Agrément covers the following:

- Conditions of use;
- Production Control, Quality Management System and the Annual Verification Procedure;
- System components and ancillary items, points of attention for the Specifier and examples of details;
- Installation;
- Independently assessed System characteristics and other information;
- Compliance with national Building Regulations, other regulatory requirements and Third-Party Acceptance, as appropriate;
- Sources.

MAJOR POINTS OF ASSESSMENT

Moisture control - see Section 2.2.7 - the System will contribute to limiting the risk of condensation and resisting the transfer of water across a cavity.

Fire performance - see Section 2.2.8 - the glass mineral wool insulation fibres are classified as European Classification A1 and the veil is classified as European Classification E, in accordance with BS EN 13501-1.

Thermal performance - see Section 2.2.9 - the System improves the thermal performance of walls, can enable the walls to meet the design U-value requirements and has a declared thermal conductivity of 0.033 W/mK.

Adequacy of fill - see Section 2.2.10 - the System can fully fill a cavity (with no voids/gaps and a consistent density) when installed correctly.

Durability - see Section 2.2.11 - the System shall have a service life durability equivalent to that of the building into which it is incorporated.

UKCA, UKNI and CE marking - see Section 2.2.12 - the Agrément holder has responsibility for conformity marking, in accordance with all relevant British and European Product Standards.

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1 (GENERAL CONSIDERATIONS

1.1 CONDITIONS OF USE

1.1.1 Limitations

This Agrément has been prepared in accordance with the mandatory requirements defined in the relevant Kiwa Technical Requirement. Some information in this Agrément is provided for guidance or reference purposes only; this information falls outside the scope of the Technical Requirement.

1.1.2 Application

The assessment of the System relates to its use in accordance with this Agrément and the Agrément holder's requirements.

1.1.3 Assessment

Kiwa Ltd. has assessed the System in combination with relevant test reports, technical literature, the Agrément holder's quality plan, DoPs and site visit, as appropriate.

1.1.4 Installation supervision

The quality of installation and workmanship shall be controlled by a competent person who shall be an employee of an Approved Installer.

The System shall be installed strictly in accordance with the instructions of the Agrément holder and the requirements of this Agrément.

1.1.5 Geographical scope

The validity of this document is limited to England, Wales, Scotland, Northern Ireland and Ireland, with due regard to Section 3 of this Agrément (CDM, national Building Regulations and Third-Party Acceptance).

1.1.6 Validity

The purpose of this Agrément is to provide well-founded confidence to apply the System within the scope described. The validity of this Agrément is as published on www.kiwa.co.uk/bda.

1.2 PRODUCTION CONTROL AND QUALITY MANAGEMENT SYSTEM

Kiwa Ltd. has conducted an audit of the Agrément holder and determined that they fulfil all their obligations in relation to this Agrément in respect of the System.

The initial audit demonstrated that the Agrément holder has a satisfactory Quality Management System (QMS) and is committed to continuously improving their quality plan. Document control and record-keeping procedures were deemed satisfactory. A detailed Production Quality Specification (PQS) has been compiled to ensure traceability and compliance under the terms of this Agrément.

1.3 ANNUAL VERIFICATION PROCEDURE - CONTINUOUS SURVEILLANCE

To demonstrate that the System conforms with the requirements of the technical specification described in this Agrément, an Annual Verification Procedure has been agreed with the Agrément holder in respect of continuous surveillance and assessment, and auditing of the Agrément holder's QMS.

2 TECHNICAL ASSESSMENT

This Agrément does not constitute a design guide for the System. It is intended only as an assessment of safety and fitness for purpose.

2.1 SYSTEM COMPONENTS AND ANCILLARY ITEMS

2.1.1 Components included within the scope of this Agrément

The components listed in Table 1 below are integral to the System.

Table 1 - Integral components

System	Component		Description	
Supafil® Frame and Supafil® MAX Frame 033	glass mineral wool insulation	Supafil® Frame (15.5 kg bales)	blown glass mineral wool fibres, manufactured in accordance with BS EN 14064-1, λ_D 0.033 W/mK	minimum installed density of either 30 kg/m³ or 35 kg/m³ ^a
		Supafil® MAX Frame 033 (174 kg bales)		minimum installed density of 35 kg/m³ ^{aa}
	veil	Supafil® Veil	a 0.2 mm thick translucent non-woven polypropylene white veil, with a density of 30 g/m² and a tensile strength of 75 N (MD) and 40 N (CD), stapled to timber studs, for use with Supafil® Frame with density of 30 kg/m³	

[^] installation of Supafil® Frame with density of 35 kg/m³ is outside the scope of this Agrément (off-site installation)

^{^^} installation of Supafil® MAX Frame 033 is outside the scope of this Agrément (off-site installation)

All following considerations in this Agrément relate only to the installation of Supafil® Frame with density of 30 kg/m³.

2.1.2 Ancillary items falling outside the scope of this Agrément

The following ancillary items detailed in this Section may be used in conjunction with the System, but fall outside the scope of this Agrément:

- blowing machine;
- application equipment;
- OSB sheathing board;
- timber-framed supporting wall;
- vapour control layer, (hereinafter 'VCL');
- plasterboard;
- staples (for veil application);
- breathable bag.

2.2 POINTS OF ATTENTION TO THE SPECIFIER

2.2.1 Design

2.2.1.1 Design responsibility

A Specifier may undertake a project-specific design, in which case it is recommended that the Specifier co-operates closely with the Agrément holder. The Specifier or Installer is responsible for the final as-built design.

2.2.1.2 Basis of design

The characteristics detailed in the section titled 'Major Points of Assessment' shall be considered during the use of the System.

2.2.1.3 General design considerations

A project-specific design for the whole wall construction incorporating the System is required to evaluate and approve the suitability of the wall for installation of the System. This shall be done in close co-operation with the Agrément holder.

It is critical to regularly check the density of the glass mineral wool fibres prior to, and during, every application within the appropriate timeframe, in accordance with the instructions of the Agrément holder.

The veil is stapled into the timber studs across the entire wall area at no more than 75 mm centres between them, creating discrete cavities for each stud void.

The veil shall have adequate resistance to tearing and shall be regularly inspected during installation to ensure it is not damaged. If damage occurs to the veil, it shall be repaired appropriately in accordance with the instructions of the Agrément holder.

The installation equipment (blowing machine, switches and gauges) shall be inspected prior to each application to ensure they are in good condition and appropriately set up.

The minimum cavity width to be filled with the System shall not be less than 90 mm.

The System:

- is blown by pushing a nozzle through the veil and injecting the mineral wool fibres into the internal face of external sheathed timber-framed walls;
- shall fully fill the cavities (with no voids/gaps and a consistent density), until the entire wall cavity is insulated;
- remains stable within a cavity and has adequate resistance to settlement.

Walls incorporating the System shall:

- be designed and constructed in such a way as to prevent moisture ingress;
- incorporate a suitable breather membrane over the sheathing board and a VCL on the warm side of the insulation;
- be designed in accordance with the relevant Standards to limit mid-span deflections.

The Specifier shall determine the suitability of the System to be used on walls in the specific exposure zone detailed in BRE Report 262 on a project-specific basis, with the appropriate local wind-driven rain index, in accordance with BS 8104.

Timber supporting walls shall be designed in accordance with BS EN 1995-1-1 / I.S. EN 1995-1-1, BS EN 14081-1 and PD 6693-1; the timber structure shall be at least 37 mm thick with a minimum width of 72 mm.

The System can be installed on sheathed timber supporting walls, where sheathing consists of exterior-grade cement-bonded particle boards (hereinafter 'CBPB'), marine-grade plywood, oriented strand boards (hereinafter 'OSB') or fibre cement boards. Manufacturing requirements are as follows:

- CBPB shall be manufactured in accordance with BS EN 12467 or BS EN 634-2, with a minimum thickness of 10 mm;
- marine-grade plywood shall be manufactured in accordance with BS EN 313-1, with a minimum thickness of 12 mm;
- OSB shall be OSB/3, manufactured in accordance with BS EN 300, with a minimum thickness of 9 mm;
- fibre cement boards shall be weather resistance Category A or B and bending strength Class 2 or 3, manufactured in accordance with BS EN 12467, with a minimum thickness of 9 mm.

Butt joints, fasteners and penetrations (e.g., flues, ducts) shall be sealed and taped to ensure that water does not penetrate into a wall.

Care is needed for design detailing of joints around openings, penetrations, wall corners and movement joints, which shall be in accordance with BS 6093 and shall incorporate cavity barrier, cavity closer, damp-proof course (hereinafter 'DPC'), as required.

Care shall be taken in the overall design and construction of junctions with other elements and openings to minimise thermal bridges and air infiltration.

Ventilation openings shall be arranged to prevent the ingress of rain, snow, birds and small animals, and reduce the risk of blockage by other building operations.

2.2.1.4 Project-specific design considerations

The project-specific design shall:

- be determined by the Agrément holder;
- take into account the requirements of the relevant national Building Regulations - see Section 3.2;
- take into account the service life durability required - see Section 2.2.11.

A pre-installation survey is required to allow determination of the project-specific design - see Section 2.4.1.

2.2.2 Applied building physics (heat, air, moisture)

A Specialist shall check the hygrothermal behaviour of a project-specific design incorporating the System and, if necessary, offer advice on improvements to achieve the final specification. The Specialist can be either a qualified employee of the Agrément holder or a suitably qualified consultant (in which case it is recommended that the Specialist co-operates closely with the Agrément holder).

2.2.3 Permitted applications

Only applications designed according to the specifications given in this Agrément are permitted. In each case, the Specifier and Installer shall co-operate closely with the Agrément holder.

2.2.4 Installer competence level

The System shall be installed strictly in accordance with the instructions of the Agrément holder and the requirements of this Agrément.

Installation shall be by employees trained and approved by the Agrément holder and subject to inspections by Kiwa Ltd. under a Kiwa Installation Assessment & Surveillance Scheme.

2.2.5 Delivery, storage and site handling

The System is delivered in suitable packaging bearing relevant identification information (such as the System name, production identification date or batch number, the Agrément holder's name, etc.) and, where applicable, the BDA Agrément® logo incorporating the number of this Agrément.

Prior to installation, the System components shall be stored in accordance with the Agrément holder's requirements. Good housekeeping protocols shall be followed to avoid damage.

Appropriate personal protective equipment shall be worn during handling and installation of the System.

The System is supplied in polythene packs which are designed for short term protection only. For longer term protection on site, the System shall be stored either indoors, or under cover and off the ground.

2.2.6 Maintenance and repair

Once installed, the System does not require regular maintenance. For advice in respect of repair, consult the Agrément holder.

Performance factors in relation to the Major Points of Assessment

2.2.7 Moisture control

Condensation risk

The performance of the System, in relation to water vapour permeability and short-term water absorption, is detailed in Section 2.5.1.

External walls incorporating the System will adequately limit the risk of surface and interstitial condensation when designed in accordance with BS 5250.

A condensation risk analysis is required and shall be completed at design stage for each application of the System. Walls shall adequately limit the risk of surface and interstitial condensation in accordance with the national Building Regulations.

2.2.8 Fire performance

The glass mineral wool insulation fibres are classified as European Classification A1, in accordance with BS EN 13501-1, in line with the recommendations of European Commission Decision 96/603/EC.

The veil is classified as European Classification E in accordance with BS EN 13501-1.

Buildings of sheathed timber-framed construction are restricted in height or boundaries in accordance with relevant national Buildings Regulations:

- for all building in Wales and Northern Ireland, and non-residential buildings in England, the System shall not be used on buildings with a storey of 18 m or more above ground level. Refer to the relevant national Building Regulations for types of buildings and any exclusions that may apply;
- for residential buildings in England, the System is restricted to buildings with no floor more than 11 m above ground level. Refer to the national Building Regulations for types of buildings and any exclusions that may apply;
- for all buildings in Scotland, the System is restricted to buildings with no floor more than 11 m above ground level and not less than 1 m from the boundary. In such cases, the System may be excluded from the unprotected area calculation, regardless of openings. Refer to the national Building Regulations for types of buildings and any exclusions that may apply;
- for dwellings in Ireland, the System is restricted to buildings with no floor more than 15 m above ground level. Refer to the national Building Regulations for types of buildings and any exclusions that may apply;
- for buildings other than dwellings in Ireland, the System is restricted to buildings with no floor more than 18 m above ground level. Refer to the national Building Regulations for types of buildings and any exclusions that may apply.

The fire resistance of walls is based on the occupancy, size and use of a building and shall be a minimum of 30 minutes. It is then specified in 30-minute intervals thereafter. The System shall be covered by a plasterboard lining fixed to studs or battens and with all joints taped, sealed and supported by studs, noggins or battens, to give a minimum 30-minute fire rating.

Walls shall be designed and constructed:

- to adequately resist the passage and penetration of fire;
- so that the unseen spread of fire and smoke with concealed spaces in a wall is inhibited.

In all completed wall constructions, cavity fire barriers shall be provided to comply with the relevant provisions of the national Building Regulations.

Care shall be taken to ensure continuity of fire resistance at junctions, around openings and service penetrations with fire-resisting elements, in accordance with the national Building Regulations.

Designers shall refer to the relevant national Building Regulations and guidance for detailed conditions of use. This is particularly relevant to requirements for supporting wall fire performance, cavity closers and fire stopping of service penetrations, and combustibility limitations for other materials and components used in the overall wall construction.

2.2.9 Thermal performance

For the purpose of U-value calculations and to determine if the requirements of the national Building (or other statutory) Regulations are met, the thermal resistance of the external walls incorporating the System shall be calculated in accordance with relevant publications such as BS EN ISO 6946, BS EN ISO 10211, BS 5250 and BRE Report 443, using the insulation's declared thermal conductivity (λ_D).

Care shall be taken in the overall design and construction of junctions with other elements and openings to minimise thermal bridges and air infiltration. Due consideration shall be given to the Government Accredited Construction Details.

Guidance on linear thermal transmittance, heat flows and surface temperature factors can be found in the documents supporting the national Building Regulations and in BS EN ISO 10211, BRE Information Paper 1/06, BRE Report 262, BRE Report 497 and PAS 2030. If required, further information can be provided by the Agrément holder.

The requirement for limiting heat loss through the building fabric, including the effect of thermal bridging, can be satisfied if the U-value of an external wall incorporating the System does not exceed the maximum U-values given in the national Building Regulations.

2.2.10 Adequacy of fill

A cavity between the timber studs can be fully filled (with no voids/gaps and a consistent density), including around details.

Care shall be taken in difficult-to-fill areas between timber studs, e.g. corners, to ensure that the cavity is sufficiently filled with the System.

2.2.11 Durability

The System shall have a service life durability equivalent to that of the building into which it is incorporated. The expected lifespan of the building itself shall be at least 60 years.

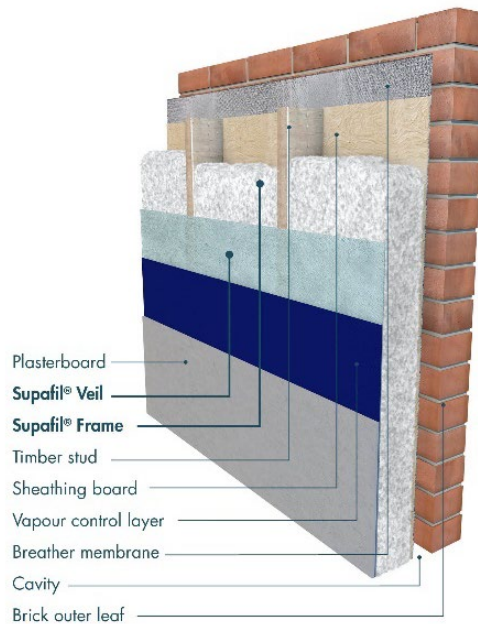
Once installed, the System is not susceptible to damage from environmental conditions normally encountered in the UK.

2.2.12 UKCA, UKNI and CE marking

The British and European standard for the System is BS EN 14064-1.

2.3 EXAMPLES OF TYPICAL DETAILS

Diagram 1 - Detail of Supafil® Frame with density of 30 kg/m³ between timber studs



2.4 INSTALLATION

The System shall be installed strictly in accordance with the instructions (hereinafter 'Installation Manual') of the Agrément holder, the requirements of this Agrément and the requirements of BS 8000-0.

All following considerations in this Section relate only to the installation of Supafil® Frame with density of 30 kg/m³.

2.4.1 Project-specific installation considerations

The project-specific design shall be determined from a pre-installation survey.

The primary requirement of the pre-installation survey is to ensure that:

- the external wall construction is suitable for the installation of the System;
- there is no existing rain ingress and no signs of damp on the internal face of the framed wall, other than that caused by condensation;
- external walls are in a good state of repair and show no evidence of frost damage;
- the cavity between the timber studs is free from blockages such as debris;
- the presence of any penetrations in the walls, such as chimneys, stoves and flues, is checked;
- the volume of the cavity and any features are measured correctly, for the purpose of calculating overall density of installation;
- the cavity between the timber studs is free from moisture, cracks and any defects;
- DPC positions at window and door heads are checked;
- the density of the System is determined to meet U-value requirements.

2.4.2 Preparation

The following considerations apply before starting the work:

- blowing of the System shall not take place until the timber-framed wall is weathertight;
- essential ventilation openings and all flues in the timber-framed wall shall be checked. If adequate sleeving is not present, installation shall not proceed until these openings have been sleeved or otherwise modified to prevent blockage by the System.

The following works shall be undertaken before installing the System:

- wear appropriate personal protective equipment (dust suit, face mask and goggles);
- ensure effective sealing of any gaps to reduce air infiltration;
- enclose the wall cavities by stapling the veil to create an enclosed void to hold the System in place;
- ensure that the veil is not fixed either too tightly or with an excess of material across the stud that may cause creases or folds;
- ensure that the distance between staples shall be no more than 75 mm and that the veil layer is stapled across the entire wall area;
- if necessary, re-route or trunk services e.g. electrical cables;
- seal window, door and other openings as necessary;
- determine the rate of installation by initially filling a breathable bag for a set period of time at the chosen machine setting;
- target density and its nominal blow time shall be identified and recorded prior to the installation.

2.4.3 Outline installation procedure

Detailed installation procedures can be found in the Agrément holder's Installation Manual.

The outline procedure is as follows:

- set-up the blowing machine to the correct parameters for the installation;
- push the nozzle through the veil, so the filling process can commence;
- angle the tip of the injection nozzle downwards and start filling the bottom half of the void. Slowly rotate the nozzle from left to right and gradually withdraw back up the stud, ensuring that an even and compact density is achieved;
- once the bottom half of the void is filled, turn the nozzle and push the tip towards the top half of the void and fill in the top half in the same way;
- blow the System until the void between the studs is filled to the appropriate density;
- use a smaller nozzle to inject the System into small gaps or areas and fit tightly around obstructions;
- continue filling all the cavities until the entire wall area is insulated and the required density is achieved;
- withdraw the nozzle from the insertion hole;
- check the density of the installed System by counting the number of bags used and calculating the total volume of the filled area. Alternatively, refer to the Installation Manual for further advice.

2.4.4 Finishing

The following finishing is required on completion of the installation:

- inspect the adequacy of installation as per the Agrément holder's guidance;
- apply required finishes, such as VCL and plasterboard lining;
- remove all equipment;
- clean up any spilled material or debris;
- leave the site as it was found;
- complete job/project declaration form to confirm installation details and report density checks parameters.

2.5 INDEPENDENTLY ASSESSED SYSTEM CHARACTERISTICS

2.5.1 Moisture control

Characteristic	System component	Standard	Result
Short-term water absorption (W_p)	All glass mineral wool insulation	BS EN 1609	< 1 kg/m ²
Water vapour resistance (μ)		BS EN 14064-1	1

2.5.2 Fire performance

Characteristic	System component	Standard	Result
Reaction to fire	All glass mineral wool insulation	BS EN 13501-1	A1
	Veil		E

2.5.3 Thermal performance

Characteristic	System component	Standard	Result
Thermal conductivity, λ_D	All glass mineral wool insulation	BS EN 12667	0.033 W/mK

3.1 THE CONSTRUCTION (DESIGN AND MANAGEMENT) REGULATIONS 2015 AND THE CONSTRUCTION (DESIGN AND MANAGEMENT) REGULATIONS (NORTHERN IRELAND) 2016

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

3.2 THE NATIONAL BUILDING REGULATIONS

In the opinion of Kiwa Ltd., the System, if installed and used in accordance with Section 2 of this Agrément, can satisfy or contribute to satisfying the relevant requirements of the following national Building Regulations.

This Agrément shall not be construed to confer the compliance of any project-specific design with the national Building Regulations.

3.2.1 England

The Building Regulations 2010 and subsequent amendments

- B3(4) Internal fire spread (Structure) - the System can inhibit the unseen spread of fire and smoke within concealed spaces
- C2(a) Resistance to moisture - the System does not absorb water by capillary action
- C2(b) Resistance to moisture - a wall incorporating the System can resist precipitation and satisfy this Requirement
- C2(c) Resistance to moisture - the System can contribute to satisfying this Requirement
- L1(a)(i) Conservation of fuel and power - the System can contribute to limiting heat gains and losses through walls
- Regulation 7(1) Materials and workmanship - the System is manufactured from suitably safe and durable materials for their application, and can be installed to give a satisfactory performance
- Regulation 23(1) Requirements relating to thermal elements - the System can contribute to a wall complying with the requirements of L1(a)(i)
- Regulation 26 CO₂ emission rates for new buildings - the System can contribute to satisfying this Regulation
- Regulation 26A Fabric energy efficiency rates for new dwellings - the System can contribute to satisfying this Regulation
- Regulation 26C Target primary energy rates for new buildings - the System can contribute to satisfying this Regulation

3.2.2 Wales

The Building Regulations 2010 and subsequent amendments

- B3(4) Internal fire spread (Structure) - the System can inhibit the unseen spread of fire and smoke within concealed spaces
- C2(a) Resistance to moisture - the System does not absorb water by capillary action
- C2(b) Resistance to moisture - a wall incorporating the System can resist precipitation and satisfy this Requirement
- C2(c) Resistance to moisture - the System can contribute to satisfying this Requirement
- L1(a)(i) Conservation of fuel and power - the System can contribute to limiting heat gains and losses through walls
- Regulation 7(1) Materials and workmanship - the System is manufactured from suitably safe and durable materials for their application, and can be installed to give a satisfactory performance
- Regulation 23(1) Requirements relating to thermal elements - the System can contribute to a wall complying with the requirements of L1(a)(i)
- Regulation 26 CO₂ emission rates for new buildings - the System can contribute to satisfying this Regulation
- Regulation 26A Primary energy rates for new buildings - the System can contribute to satisfying this Regulation
- Regulation 26B Fabric performance values for new dwellings - the System can contribute to satisfying this Regulation
- Regulation 26C Energy efficiency rating - the System can contribute to satisfying this Requirement

3.2.3 Scotland

The Building (Scotland) Regulations 2004 and subsequent amendments

3.2.3.1 Regulation 8 (1) Durability, workmanship and fitness of materials

- The System is manufactured from acceptable materials and is adequately resistant to deterioration and wear under normal service conditions, provided it is installed in accordance with the requirements of this Agrément

3.2.3.2 Regulation 9 Building Standards - Construction

- 2.4 Cavities - the System can inhibit the unseen spread of fire and smoke within the cavities
- 3.4 Moisture from the ground - the System does not absorb water by capillary action
- 3.10 Precipitation - the System can resist precipitation penetrating to the inner face of the building
- 3.15 Condensation - the System will contribute to limiting the risk of surface and interstitial condensation
- 6.2 Building insulation envelope - the System will contribute to the insulation envelope to resist thermal transfer
- 7.1(a)(b) Statement of sustainability - the System 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; in addition, the System can contribute to a construction meeting a higher level of sustainability as defined in this Standard

3.2.3.3 Regulation 12 Building Standards - Conversions

- All comments given under Regulation 9 also apply to this Regulation, with reference to Schedule 6 of The Building (Scotland) Regulations 2004 and subsequent amendments, clause 0.12 of the Technical Handbook (Domestic) and clause 0.12 of the Technical Handbook (Non-Domestic)

3.2.4 Northern Ireland

The Building Regulations (Northern Ireland) 2012 and subsequent amendments

- 23(1)(a)(i)(ii)(iii)(b) Fitness of materials and workmanship - the System is manufactured from materials which are suitably safe and acceptable as described in this Agrément
- 28 Resistance to moisture and weather - the System can contribute to protecting the building from ground moisture and passage of moisture from the weather to the inner face
- 29 Condensation - the System can be designed and constructed to prevent interstitial condensation
- 35(4) Internal fire spread (Structure) - the System can inhibit the unseen spread of fire and smoke within concealed spaces
- 39(a)(i) Conservation measures - the System can contribute to limiting heat gains and losses through walls
- 40(2) Target carbon dioxide emission rate - a wall incorporating the System shall be designed and constructed not to exceed its target carbon dioxide emission rate
- 43 Renovation of thermal elements - renovation work shall be carried out to ensure a wall complies with Requirement 39(a)(i)

3.2.5 Ireland

Building Regulations 1997 (Ireland) and subsequent amendments

In order to demonstrate compliance with Irish Building Regulations, this BDA Agrément® certifies that the System complies with the requirements of a recognised document and indicates it is suitable for its intended purpose and use.

- B3(3) Internal fire spread (Structure) - the System can inhibit the unseen spread of fire and smoke within concealed spaces
- C4 Resistance to weather and ground moisture - a wall incorporating the System can contribute to adequately protecting a building from the passage of moisture from precipitation and condensation
- D1 Materials and workmanship - the System is manufactured from suitably safe and durable materials for their application, and can be installed to give a satisfactory performance
- L1 Conservation of fuel and energy - the System can contribute to limiting heat gains and losses through walls
- L2(a) Conservation of fuel and energy (in existing dwellings) - the System can contribute to limiting heat gains and losses through walls
- L4(a) Conservation of fuel and energy (in existing buildings other than dwellings) - the System can contribute to limiting heat gains and losses through walls
- L5(c) Conservation of fuel and energy (in new buildings other than dwellings) - the System can contribute to limiting heat gains and losses through walls
- Regulation 7 Conservation of fuel and energy in existing dwellings - the System can contribute to satisfying this Requirement
- Regulation 8(c) Conservation of fuel and energy in new dwellings - the System can contribute to satisfying this Requirement

3.3 THIRD-PARTY ACCEPTANCE

None requested by the Agrément holder.

4 SOURCES

- BS EN ISO 6946:2017 Building components and building elements. Thermal resistance and thermal transmittance. Calculation methods
- BS EN ISO 9001:2015 Quality management systems. Requirements
- BS EN ISO 10211:2017 Thermal bridges in building construction. Heat flows and surface temperatures. Detailed calculations
- BS EN 300:2006 Oriented strand boards (OSB). Definitions, classification and specifications
- BS EN 313-1:1996 Plywood. Classification and terminology. Plywood. Classification and terminology. Classification
- BS EN 634-2:2007 Cement-bonded particleboards. Specifications. Requirements for OPC bonded particleboards for use in dry, humid and external conditions
- BS EN 1995-1-1:2004+A2:2014 Eurocode 5: Design of timber structures. General. Common rules and rules for buildings
- NA to BS EN 1995-1-1:2004+A2:2014 UK National Annex to Eurocode 5: Design of timber structures. General. Common rules and rules for buildings
- BS EN 12467:2012+A2:2018 Fibre-cement flat sheets. Product specification and test methods
- BS EN 12667:2001 Thermal performance of building materials and products. Determination of thermal resistance by means of guarded hot plate and heat flow meter methods. Products of high and medium thermal resistance
- BS EN 13501-1:2018 Fire classification of construction products and building elements. Classification using data from reaction to fire tests
- BS EN 14064-1:2018 Thermal insulation products for buildings. In-situ formed loose-fill mineral wool (MW) products. Specification for the loose-fill products before installation
- BS EN 14081-1:2016+A1:2019 Timber structures. Strength graded structural timber with rectangular cross section. General requirements
- BS 5250:2021 Management of moisture in buildings. Code of practice
- BS 6093:2006+A1:2013 Design of joints and jointing in building construction. Guide
- BS 8000-0:2014+A1:2024 Workmanship on construction sites. Introduction and general principles
- BS 8104:1992 Code of practice for assessing exposure of walls to wind-driven rain
- BRE Information Paper 1/06:2006 Assessing the effects of thermal bridging at junctions and around openings
- BRE Report 262:2002 Thermal insulation: avoiding risks
- BRE Report 443:2006 Conventions for U-value calculations
- BRE Report 497:2016 Conventions for calculating linear thermal transmittance and temperature factors
- European Commission Decision 96/603/EC: Commission Decision of 4 October 1996 establishing the list of products belonging to Classes A 'No contribution to fire' provided for in Decision 94/611/EC implementing Article 20 of Council Directive 89/106/EEC on construction products
- I.S. EN 1995-1-1:2005 Eurocode 5: Design of timber structures. Part 1-1: General. Common rules and rules for buildings
- I.S. EN 1995-1-1/NA:2005+A1:2013 Irish National Annex to Eurocode 5: Design of timber structures. Part 1-1: General. Common rules and rules for buildings
- PAS 2030:2023 Installation of energy efficiency measures in existing dwellings. Specification
- PAS 2035:2023 Retrofitting dwellings for improved energy efficiency. Specification and guidance
- PD 6693-1:2019 Recommendations for the design of timber structures to Eurocode 5: Design of timber structures. General. Common rules and rules for building
- PD 6697:2019 Recommendations for the design of masonry structures to BS EN 1996-1-1 and BS EN 1996-2

Remark - Apart from these sources, technical information and confidential reports have been assessed; any relevant documents are in the possession of Kiwa Ltd. and are kept in the Technical Assessment File of this Agrément. The Installation Manual for the System may be subject to change; contact the Agrément holder for the clarification of revisions.

5 AMENDMENT HISTORY

Revision	Amendment description	Author	Approver	Date
-	First issue	A Chapman	C Devine	October 2024
A	Inclusion of veil and updates to Fire Performance	L Tosi	C Devine	May 2025

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