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BAW-23-306-P-A-UK
BDA Agrément®
Wallclad
Thermal Insulation Layer

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SCOPE OF AGRÉMENT

This BDA Agrément® (hereinafter 'Agrément') relates to Wallclad (hereinafter the 'Product'). The Product is a mineral wool insulation slab for use as a thermal insulation layer behind a suitable external wall insulation system, which is installed onto structural timber frame (hereinafter 'STF'), light-gauge steel frame (hereinafter 'LGSF'), masonry or concrete substrates. The Product is suitable for installation above damp-proof course (hereinafter 'DPC') level and a minimum of 150 mm above ground level. The Product is for existing and new dwellings, and buildings other than dwellings.

DESCRIPTION

The Product is a mineral wool (hereinafter 'MW') insulation slab, manufactured in accordance with BS EN 13162. The Product can be finished with brick slip or render system (outside the scope of this Agrément).

ILLUSTRATION

THIRD-PARTY ACCEPTANCE

None requested by the Agrément holder.

STATEMENT

It is the opinion of Kiwa Ltd. that the Product 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

Alpheo 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 Product. This Agrément covers the following:

- Conditions of use;
- Production Control, Quality Management System and the Annual Verification Procedure;
- Product components and ancillary items, points of attention for the Specifier and examples of details;
- Installation;
- Independently assessed Product 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 Product can contribute to limiting the risk of interstitial and surface condensation.

Strength - see Section 2.2.8 - The Product shall not be relied upon to contribute to structural performance of the construction assembly.

Fire performance - see Section 2.2.9 - the Product is classified as European Classification A1, in accordance with BS EN 13501-1.

Thermal performance - see Section 2.2.10 - the Product has a declared thermal conductivity (λ_D) of 0.041 W/mK.

Durability - see Section 2.2.11 - the Product 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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1.1 - Conditions of use
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Section 2 - Technical assessment
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2.2 - Points of attention to the Specifier
2.3 - Examples of typical details
2.4 - Installation
2.5 - Independently assessed Product characteristics
Section 3 - CDM, national Building Regulations and Third-Party Acceptance
3.1 - The Construction (Design and Management) Regulations 2015 and The Construction (Design and Management) Regulations (Northern Ireland) 2016
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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 Product relates to its use in accordance with this Agrément and the Agrément holder's requirements.

1.1.3 Assessment

Kiwa Ltd. has assessed the Product 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 Product 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 Product 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 Product.

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 Product 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 Product. It is intended only as an assessment of safety and fitness for purpose.

2.1 PRODUCT 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 Product.

Table 1 - Integral components

Product	Description	Dimensions
Wallclad	MW insulation slab, manufactured in accordance with BS EN 13162, available in 120 kg/m^3 and 140 kg/m^3 densities, λ_D of 0.041 W/mK	1,200 mm by 600 mm, 50 to 150 mm thick

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 Product, but fall outside the scope of this Agrément:

- substrate wall;
- cavity rail;
- rainscreen cladding system;
- vapour control layer (hereinafter 'VCL');
- breather membrane;
- mechanical fixings;
- scrim adhesive;
- fibre reinforcing mesh;
- finishes - brick slip and render system.

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 Product.

2.2.1.3 General design considerations

A project-specific design is required. This shall be developed in close co-operation with the Agrément holder.

The Product is suitable for dual-layer applications, enabling a total insulation thickness of up to 300 mm.

The supporting wall shall have adequate strength and stiffness. This shall be verified by a qualified structural engineer.

The Product shall be installed above DPC level and a minimum of 150 mm above ground level.

Internal wet work (e.g. screed or plastering) shall be completed and allowed to dry prior to the application of the Product.

STF 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 not be less than 37 mm thick, with a minimum width of 72 mm.

LGSF supporting walls shall be designed in accordance with BS EN 1993-1-1 / I.S. EN 1993-1-1 and BS EN 1993-1-3 / I.S. EN 1993-1-3. The steel structure shall be not less than 1.2 mm thick, with a minimum of 50 mm flanges.

Masonry buildings which incorporate the Product shall be designed and constructed in accordance with:

- BS EN 1996-1-1 / I.S. EN 1996-1-1;
- BS EN 1996-1-2 / I.S. EN 1996-1-2;
- BS EN 1996-2 / I.S. EN 1996-2;
- BS EN 1996-3 / I.S. EN 1993-3;
- PD 6697.

The Product can be installed on supporting walls (outside the scope of this Agrément) constructed from LGSF and STF, where sheathing consists of cement-bonded particle board (hereinafter 'CBPB'), marine-grade plywood, oriented strand board (hereinafter 'OSB') or fibre cement boards:

- 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 11 mm;
- fibre cement boards shall be manufactured in accordance with BS EN 12467, with a minimum thickness of 9 mm.

Sheathing boards shall be covered with a breather membrane; if a breather membrane is omitted, water can penetrate a wall via taped butt joints, fasteners and penetrations (e.g. flues, ducts).

Supporting walls shall be designed in accordance with the relevant Standards to limit mid-span deflections.

Supporting walls incorporating the Product shall be detailed to reduce the risk of damage due to movement in the supporting wall, taking into consideration differential movement in dissimilar materials.

The Product shall be secured to the supporting wall with suitable mechanical fixings (outside the scope of this Agrément).

Buildings incorporating the Product shall be designed and constructed to prevent moisture penetration and air infiltration, in accordance with the relevant Codes and Standards.

Care is needed for design detailing of joints around openings, penetrations and movement joints, in accordance with BS 6093.

At the tops of walls, the Product shall be protected by an adequate coping, overhang or other project-specific detail.

Where required, properly constructed movement joints (designed to cater for the calculated degree of movement to control expansion, contraction and cracking without reducing the stability and weathertightness of the wall) shall be carried through the Product using movement beads of polyvinyl chloride (PVC), powder-coated galvanised steel or stainless steel.

Example of relevant detailing for external wall insulation (EWI) systems used with LGSF can be found in SCI Publication P343.

2.2.1.4 Project-specific design considerations
The project-specific design shall:
- be determined by the Specifier;
- 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 Product 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 Product shall be installed strictly in accordance with the instructions of the Agrément holder and the requirements of this Agrément.

Installation shall be by an Approved Installer, trained and approved by the Agrément holder.

2.2.5 Delivery, storage and site handling
The Product is delivered in suitable packaging bearing relevant identification information (such as the Product 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 Product shall be stored in accordance with the Agrément holder's requirements. Good housekeeping protocols shall be followed to avoid damage. Where required, particular care shall be taken to:
- avoid exposure to direct sunlight for extended periods of time;
- avoid exposure to high or low temperatures for extended periods of time;
- store the Product in a well-ventilated covered area to protect them from rain, frost and humidity.

2.2.6 Maintenance and repair
Once installed, the Product 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
External walls incorporating the Product can adequately limit the risk of surface and interstitial condensation when designed in accordance with BS 5250 and BRE Report 262.

A condensation risk analysis shall be completed at project-specific design stage for all elements of the construction, including an assessment of junctions, openings and penetrations, to minimise the risk of surface and interstitial condensation. When the Product is correctly installed on an occupied building, no condensation will form on the internal wall. For calculations, the water vapour diffusion resistance (μ) the Product may be taken as detailed in Section 2.5.1.

Cladding cavity systems shall have a VCL installed to restrict the transfer of water vapour from occupied spaces into the cladding cavity.

The vented profiles of the cladding system shall allow any residual trapped moisture from construction to escape. The openings in the base shall be small enough to prevent the ingress of birds, animals or small insects and shall be kept free of obstructions.

2.2.8 Strength

The Product does not contribute to provide structural or loadbearing capacity within the wall system.

The substrate shall have sufficient strength to withstand all applicable loadings including wind load, dead load, imposed load and any temporary loads that could be applied during the installation. The strength and stability of the supporting wall shall be verified by a suitably qualified engineer.

The Product exhibits adequate mechanical stability (compressive stress at 10% deformation and tensile strength perpendicular to the faces) as required to withstand during handling and installation - see Section 2.5.2.

2.2.9 Fire performance

The Product is classified as European Classification A1, in accordance with BS EN 13501-1.

When the Product is used on masonry, concrete, LGSF sheathed with boards or cladding systems that are classified as A1 or A2-s1, d0 in accordance with BS EN 13501-1, it can be used on buildings without any restrictions on building height or boundaries, in accordance with the national Building Regulations.

When the Product is fixed to a sheathed STF supporting wall, it is subject to restrictions on proximity to boundaries and to building height under the national Building Regulations:

- for all buildings in Wales and Northern Ireland, and non-residential buildings in England, the Product shall not be used on buildings with a storey of 18 m or more above ground level; the Product can be used without any boundary restrictions. Refer to the relevant national Building Regulations for types of buildings and any exclusions that may apply;
- for residential buildings in England, the Product shall not be used on buildings with a storey of 11 m or more above ground level; the Product can be used without any boundary restrictions. Refer to the relevant national Building Regulations for types of buildings and any exclusions that may apply;
- for all buildings in Scotland, the Product 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 Product may be excluded from the unprotected area calculation regardless of openings. Refer to the national Building Regulations for full details of building types where restrictions apply;
- for dwellings in Ireland, the Product shall not be used on buildings with a storey of 15 m or more above ground level; the Product can be used without any boundary restrictions. Refer to the relevant national Building Regulations for types of buildings and any exclusions that may apply;
- for buildings other than dwellings in Ireland, the Product shall not be used on buildings with a storey of 18 m or more above ground level; the Product can be used without any boundary restrictions. Refer to the national Building Regulations for types of buildings and any exclusions that may apply.

The Product shall include a minimum of one stainless steel fixing per insulation slab, in addition to the other insulation fasteners normally specified.

The supporting walls shall be designed and constructed:

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

The fire resistance of supporting wall 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.

For detailed conditions of use regarding requirements for supporting wall fire performance and fire barriers, fire stopping of service penetrations and combustibility limitations for other materials and components and components used in the overall wall construction, designers shall refer to the relevant national Building Regulations.

2.2.10 Thermal performance

The Product can assist in reducing the thermal transmittance (hereinafter 'U-value') of external walls. It is essential that detailing is carried out to a high standard if the ingress of water into the Product is to be avoided and the full thermal benefit is to be obtained from the installation of the Product. Any moisture penetration will affect thermal conductivity. The cladding system (outside the scope of this Agrément) shall be designed to minimise moisture penetration to the Product.

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

The U-value of a completed wall construction will depend on the Product thickness, Product density, fixing method, type of mechanical fixing and insulating value of the supporting wall and its internal finish.

For the purposes of U-value calculations and to determine if the requirements of national Building Regulations are met, the thermal resistance and U-value of the walls incorporating the Product shall be calculated according to BS EN ISO 10211 (taking into consideration BS EN ISO 6946, BS EN ISO 10456 and BRE Report 443), using the thermal conductivity (λ_D) of the MW insulation slab (refer to Section 2.5.4).

Thermal bridging at junctions and around openings

Care shall be taken in the overall design and construction of junctions with other elements and openings to minimise cold bridging and air infiltration. Due consideration shall be given to the relevant national Building Regulations.

Guidance on linear thermal transmittance, heat flows and surface temperatures 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, PAS 2030 and PAS 2035.

2.2.11 Durability

The Product 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 Product is not susceptible to damage from environmental conditions normally encountered in the UK and Ireland.

2.2.12 UKCA, UKNI and CE marking

The British and European standard for the Product is BS EN 13162.

2.3 EXAMPLES OF TYPICAL DETAILS

Diagram 1 - Typical fixing schedule

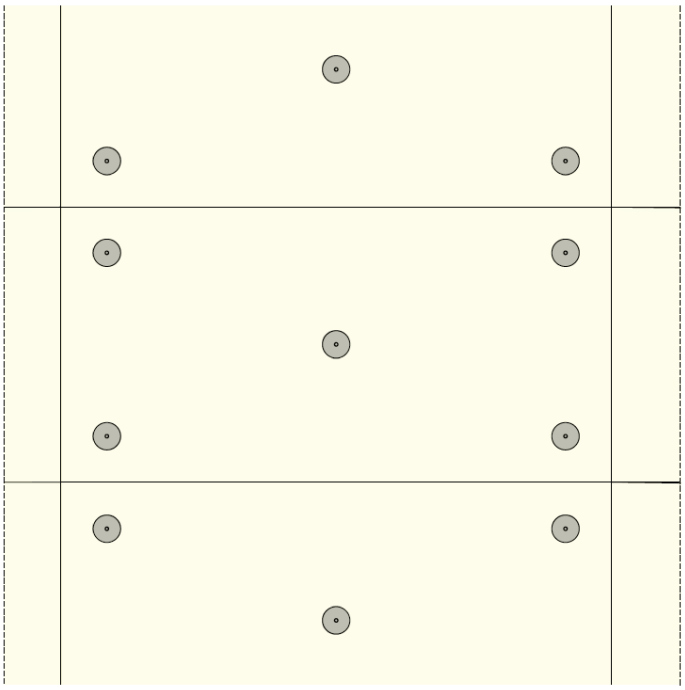
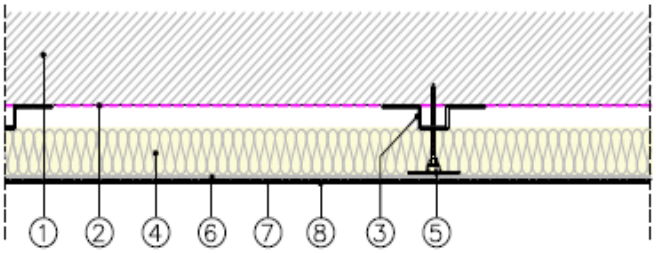
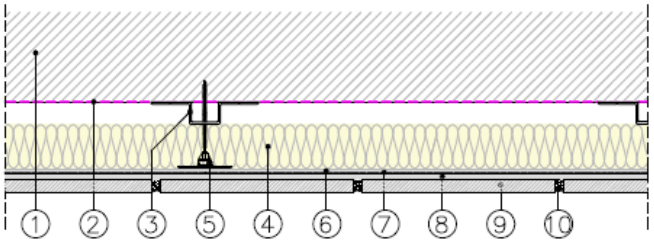


Diagram 2 - Typical cross-section and components for a render system finish



1 substrate
2 breather membrane
3 cavity rail
4 Wallclad
5 insulation support fixing
6 scrim adhesive
7 fibre reinforcing mesh
8 primer and render

Diagram 3 - Typical cross-section and components for a brick slip finish



1 substrate
2 breather membrane
3 cavity rail
4 Wallclad
5 insulation support fixing
6 scrim adhesive
7 fibre reinforcing mesh
8 brick slip adhesive
9 brick slip
10 pointing mortar

Diagram 4 - Typical build-up with LGSF and render system finishes

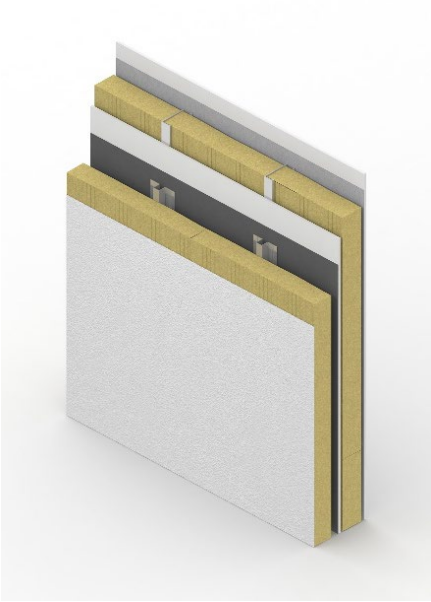
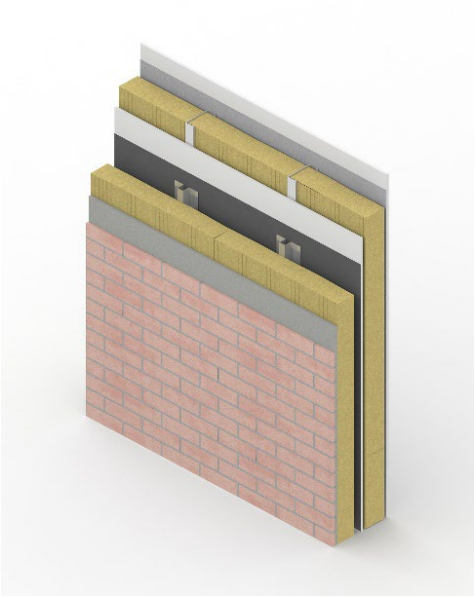


Diagram 5 - Typical build-up detail with LGSF and brick slip finishes



2.4 INSTALLATION

The Product 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.

2.4.1 Project-specific installation considerations

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

The design pull-out resistance strengths of the mechanical fixings shall be checked by a competent person and evidenced to be adequate before installation of the Product on a project-specific basis.

Subsequent project-specific design considerations shall include confirmation that existing wall is:

- structurally sound, in a good state of repair and show no evidence of rain or frost damage;
- watertight, clean and meet the requirements of the relevant Standards and national Building Regulations for airtightness.

2.4.2 Preparation

The following considerations apply before starting the work:

- the Product can be cut using a sharp, fine-toothed saw or knife;
- do not allow the Product to become wet, as this may prevent the Product from being suitable for use even after drying.

The following works shall be undertaken before installing the Product:

- the supporting wall shall be finished and free from protrusions and uneven jointing;
- surfaces shall be clean, dry and free from dirt, grease, oils, solvents and loose particles;
- a starter track shall be securely fixed at the base of the wall;
- flues, chimneys and combustion air ventilators shall be continuously sleeved through the wall.

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:

- position the Product on the starter track and mechanically fix the Product via a staggered formation;
- ensure that adjacent insulation slabs are aligned horizontally and vertically and tightly butted together;
- after placing the Product, use appropriate mechanical fixings designed for the specific substrate and Product thickness;
- the mechanical fixing pattern shall be followed in accordance with the Agrément holder's Installation Manual;
- any small gaps (less than 2 mm) shall be filled with thin silvers of insulation, as per the Agrément holder's Installation Manual;
- before applying the next layer, ensure the insulation surface is level and free of any significant irregularities.

2.4.4 Finishing

The following finishing is required on completion of the installation:

- the Product can be finished using a brick slip or render system (outside the scope of this Agrément).

2.5 INDEPENDENTLY ASSESSED PRODUCT CHARACTERISTICS

2.5.1 Moisture control

Test		Standard	Result
Water vapour diffusion resistance coefficient (μ)		BS EN 13162	1
Short-term water absorption	120 kg/m³ density	BS EN ISO 29767	< 1 kg/m²
	140 kg/m³ density		< 1 kg/m²
Long-term water absorption	120 kg/m³ density	BS EN ISO 16535	< 3 kg/m²
	140 kg/m³ density		< 3 kg/m²

2.5.2 Strength

Test		Standard	Result
Compressive stress at 10% deformation (σ_{10})	120 kg/m³ density	BS EN ISO 29469	CS(10)30
	140 kg/m³ density		CS(10)40
Tensile strength perpendicular to faces (σ_{mt})	120 kg/m³ density	BS EN 1607	TR10
	140 kg/m³ density		

2.5.3 Fire performance

Test	Standard	Result
Reaction to fire	BS EN 13501-1	A1

2.5.4 Thermal performance

Test	Standard	Result
Declared thermal conductivity (λ_D)	BS EN 12667 and BS EN 12939	0.041 W/mK

2.5.5 Durability

Test		Standard	Result
Dimensional stability	120 kg/m³ density	BS EN 1604	DS(70,90)
	140 kg/m3 density		

3 CDM, NATIONAL BUILDING REGULATIONS AND THIRD-PARTY ACCEPTANCE

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 Product, 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

- B4(1) External fire spread - the Product can adequately resist the spread of fire over walls and from one building to another
- C2(c) Resistance to moisture - the Product can adequately protect the building from interstitial and surface condensation
- L1(a)(i) Conservation of fuel and power - the Product can contribute to limiting heat gains and losses through walls
- Regulation 7(1) Materials and workmanship - the Product is manufactured from suitably safe and durable materials for their application, and can be installed to give a satisfactory performance
- Regulation 7(2) Materials and workmanship - all Product components which are part of the external wall or specified attachment, shall achieve European classification of A2-s1, d0 or A1
- Regulation 23 Requirements relating to thermal elements - the Product can contribute to walls complying with the requirements of L1(a)(i)
- Regulation 26 CO_2 emission rates for new buildings - the Product can contribute to a building not exceeding its CO_2 emission rate
- Regulation 26A Fabric energy efficiency rates for new buildings - the Product can contribute to satisfying this Regulation
- Regulation 26C Target primary energy rates for new buildings - the Product can contribute to satisfying this Regulation

3.2.2 Wales

The Building Regulations 2010 and subsequent amendments

- B4(1) External fire spread - the Product can adequately resist the spread of fire over walls and from one building to another
- C2(c) Resistance to moisture - the Product can adequately protect the building from interstitial and surface condensation
- L1(a)(i) Conservation of fuel and power - the Product can contribute to limiting heat gains and losses through walls
- Regulation
- Regulation 7(1) Materials and workmanship - the Product is manufactured from suitably safe and durable materials for their application, and can be installed to give a satisfactory performance
- Regulation 7(2) Materials and workmanship - all Product components which are part of the external wall or specified attachment, shall achieve European classification of A2-s1, d0 or A1
- Regulation 23 Requirements relating to thermal elements - the Product can contribute to walls complying with the requirements of L1(a)(i)
- Regulation 26 CO_2 emission rates for new buildings - the Product can contribute to a building not exceeding its CO_2 emission rate
- Regulation 26A Primary energy rates for new buildings - the Product can contribute to satisfying this Regulation
- Regulation 26B Fabric performance values for new dwellings - the Product can contribute to satisfying this Regulation

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 Product is manufactured from acceptable materials and is adequately resistant to deterioration and wear under normal service conditions

3.2.3.2 Regulation 8(3) Durability, workmanship and fitness of materials

- All Product components which are part of the external wall or specified attachment, shall achieve European classification of A2-s1, d0 or A1

3.2.3.3 Regulation 9 Building standards - Construction

- 2.7 Spread on external walls - the Product can inhibit the spread of fire on external walls
- 3.15 Condensation - walls incorporating the Product can protect a building from moisture caused by surface or interstitial condensation
- 6.2 Building insulation envelope - the Product will contribute to the insulation envelope to resist thermal transfer
- 7.1(a)(b) Statement of sustainability - the Product 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 Product can contribute to a construction meeting a higher level of sustainability, as defined in this Standard

3.2.3.4 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) Fitness of materials and workmanship - the Product is manufactured from materials which are suitably safe and acceptable as described in this Agrément
- 23(2) Fitness of materials and workmanship - all Product components which are part of the external wall or specified attachment, shall achieve European classification of A2-s1, d0 or A1
- 29 Condensation - the Product can adequately protect the building from interstitial and surface condensation
- 36(a) External fire spread - the Product can adequately resist the spread of fire over walls and from one building to another

- 39(a)(i) Conservation measures - the Product can contribute to limiting heat gains and losses through walls
- 40(2) Target carbon dioxide emission rates - the Product will contribute to a building to not exceed its target CO_2 emission rate
- 43 Renovation of thermal elements - the renovation work shall be carried out to ensure the wall complies with requirement 39(a)(i)

3.2.5 Ireland

Building Regulations 1997 and subsequent amendments

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

- B4 External fire spread (for buildings other than dwellings) - the Product can adequately resist the spread of fire over walls and from one building to another
- B9 External fire spread (for dwellings) - the System can adequately resist the spread of fire over walls and from one building to another
- C4 Resistance to weather and ground moisture - the Product can contribute to adequately protecting a building from the passage of moisture from precipitation
- D1 Materials and workmanship - the Product 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 Product can contribute to limiting heat gains and losses through walls
- L2(a) Conservation of fuel and energy (in existing dwellings) - the Product can contribute to limiting heat gains and losses through walls
- L4(a) Conservation of fuel and energy (in existing buildings other than dwellings) - the Product can contribute to satisfying this Requirement
- L5(c) Conservation of fuel and energy (in new buildings other than dwellings) - the Product 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+A1:2024 Quality management systems. Requirements
- BS EN ISO 10211:2017 Thermal bridges in building construction. Heat flows and surface temperatures. Detailed calculations
- BS EN ISO 10456:2007 Building materials and products. Hygrothermal properties. Tabulated design values and procedures for determining declared and design thermal values
- BS EN ISO 16535:2019 Thermal insulating products for building applications. Determination of long-term water absorption by immersion
- BS EN ISO 29469:2022 Thermal insulating products for building applications. Determination of compression behaviour
- BS EN ISO 29767:2019 Thermal insulating products for building applications. Determination of short-term water absorption by partial immersion
- 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 1607:2013 Thermal insulating products for building applications. Determination of tensile strength perpendicular to faces
- BS EN 1993-1-1:2005+A1:2014 Eurocode 3. Design of steel structures. General rules and rules for buildings
- NA+A1:2014 to BS EN 1993-1-1:2005+A1:2014 UK National Annex to Eurocode 3. Design of steel structures. General rules and rules for buildings
- BS EN 1993-1-3:2006 Eurocode 3. Design of steel structures. General rules. Supplementary rules for cold-formed members and sheeting
- NA to BS EN 1993-1-3:2006 UK National Annex to Eurocode 3. Design of steel structures. General rules. Supplementary rules for cold-formed members and sheeting
- 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 1996-1-1:2005+A1:2012 Eurocode 6. Design of masonry structures. General rules for reinforced and unreinforced masonry structures
- NA to BS EN 1996-1-1:2005+A1:2012 UK National Annex to Eurocode 6. Design of masonry structures. General rules for reinforced and unreinforced masonry structures
- BS EN 1996-1-2:2005 Eurocode 6. Design of masonry structures. General rules. Structural fire design
- NA to BS EN 1996-1-2:2005 UK National Annex to Eurocode 6. Design of masonry structures. General rules. Structural fire design
- 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
- BS EN 1996-3:2006 Eurocode 6. Design of masonry structures. Simplified calculation methods for unreinforced masonry structures
- NA+A1:2014 to BS EN 1996-3:2006 UK National Annex to Eurocode 6. Design of masonry structures. Simplified calculation methods for unreinforced masonry structures
- 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 12939:2001 Thermal performance of building materials and products. Determination of thermal resistance by means of guarded hot plate and heat flow meter methods. Thick products of high and medium thermal resistance
- BS EN 13162 2012+A1:2015 Thermal insulation products for buildings. Factory made mineral wool (MW) products. Specification
- BS EN 13501-1:2018 Fire classification of construction products and building elements. Classification using data from reaction to fire tests
- 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
- 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 443:2019 Conventions for U-value calculations
- BRE Report 497:2016 Conventions for calculating linear thermal transmittance and temperature factors
- I.S. EN 1993-1-1:2005 Eurocode 3: Design of steel structures - Part 1-1: General rules and rules for buildings
- I.S. EN 1993-1-1 National Annex:2005 Irish National Annex (Informative) to Eurocode 3: Design of steel structures - Part 1-1: General rules and rules for buildings
- I.S. EN 1993-1-3:2006 Eurocode 3 - Design of steel structures - Part 1-3: General rules - supplementary rules for cold-formed members and sheeting (including Irish National Annex)
- I.S. EN 1993-1-3 National Annex: 2006 Irish National Annex to Eurocode 3 - Design of steel structures - Part 1-3: General rules - supplementary rules for cold-formed members and sheeting
- I.S. EN 1995-1- 1:2004&A1:2008&A2:2014&AC:2006 Eurocode 5: Design of timber structures - Part 1-1: General - Common rules and rules for buildings
- NA+A1 to I.S. EN 1995-1-1:2005 Irish National Annex to Eurocode 5: Design of timber structures - Part 1-1: General - Common rules and rules for buildings
- I.S. EN 1996-1-1:2005+A1:2012/NA:2010+A1:2014 Eurocode 6 - Design of masonry structures - Part 1-1: General rules for reinforced and unreinforced masonry structures
- I.S. EN 1996-1-1 National Annex: 2005 Irish National Annex to Eurocode 6 - - Design of masonry structures - Part 1-1: General rules for reinforced and unreinforced masonry structures
- I.S. EN 1996-1-2:2005 Eurocode 6 - Design of masonry structures - Part 1-2: General rules - structural fire design (including Irish National Annex)
- I.S. EN 1996-1-2 National Annex:2005 Irish National Annex to Eurocode 6 - Design of masonry structures - Part 1-2: General rules - structural fire design
- I.S. EN 1996-2:2006 Eurocode 6 - Design of masonry structures - Part 2: Design considerations, selection of materials and execution of masonry (including Irish National Annex)
- I.S. EN 1996-2 National Annex:2006 Irish National Annex to Eurocode 6 - Design of masonry structures - Part 2: Design considerations, selection of materials and execution of masonry
- I.S. EN 1996-3:2006 Eurocode 6 - Design of masonry structures - Part 3: Simplified calculation methods for unreinforced masonry structures (including Irish National Annex)
- I.S. EN 1996-3 National Annex: 2006 Irish National Annex to Eurocode 6 - - Design of masonry structures - Part 3: Simplified calculation methods for unreinforced masonry structures
- PAS 2030:2023 Specification for the installation of energy efficiency measures in existing dwellings
- PAS 2035:2023 Retrofitting dwellings for improved energy efficiency. Specification and guidance
- PD 6693-1:2025 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
- SCI Publication P343:2006 Insulated render systems used with light steel framing

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 Product 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	M Javed	C Devine	January 2026

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