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BAW-24-355-P-A-UK
BDA Agrément®
Obex Cortex 0271FR UltraBoard Flat Sheet Building Board

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SCOPE OF AGRÉMENT

This BDA Agrément® (hereinafter 'Agrément') relates to Obex Cortex 0271FR UltraBoard (hereinafter the 'Product'). The Product is a lightweight, non-structural flat sheet building board (hereinafter 'board') with an integral breather membrane, for use in indoor and outdoor non-loadbearing applications. The Product is used for the planking and lining of walls and for sheathing timber-framed (hereinafter 'TF') or light gauge steel frame (hereinafter 'LGSF') supporting walls. The Product is for existing and new residential and non-residential buildings.

DESCRIPTION

The Product consists of a fibre-cement board (consisting of Portland cement, aggregates and other inorganic materials, reinforced on both sides with embedded alkali-resistant glass fibre mesh, manufactured in accordance with BS EN 12467) with a black, fully adhesive breather membrane on the outer face (manufactured from fibreglass cloth structure impregnated with a polymer composition, in accordance with BS EN 13859-2).

ILLUSTRATION

THIRD-PARTY ACCEPTANCE

See Section 3.3 (Third-Party Acceptance).

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:

- has adequate resistance to moisture;
- can contribute to limiting the risk of interstitial and surface condensation;
- will contribute to providing protection against water penetration.

Strength - see Section 2.2.8 - the Product can be incorporated in a building subject to typical wind and impact actions normally encountered in the UK.

Fire performance - see Section 2.2.9 - the Product is classified as European Classification A2-s1, d0, in accordance with BS EN 13501-1.

Durability - see Section 2.2.10 - 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 2.2.11 - the Agrément holder has responsibility for conformity marking, in accordance with all relevant British and European Product Standards.

CONTENTS

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 the installation company (hereinafter '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 and Northern 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
Obex Cortex 0271FR UltraBoard	fibre-cement board	fibre-cement board with formed edges and square cut ends, comprising ordinary Portland cement, aggregates and other inorganic materials, reinforced on both sides with embedded alkali-resistant glass fibre mesh; mean density 1,060 kg/m^3	1,200 mm by 2,400 mm, 12.7 mm thick Bespoke lengths up to 3,400 mm available upon request
	membrane	factory-bonded, fully adhesive, black fibreglass cloth structure, impregnated with a polymer composition to form a waterproof and vapour-permeable membrane	

The following components listed in Table 2 may be used in conjunction with the Product:

Table 2 - Ancillary items

Product	Description	Dimensions
Obex Cortex 0280FR Board Sealant (hereinafter 'board sealant')	white silicone sealant for sealing the deflection head track	600 ml foils, 12 per box
Obex Cortex 0290FR Mechanical Fixings (hereinafter 'mechanical fixings')	self-drilling ceramic coated carbon steel mechanical fixings	4.2 mm diameter, 32 mm or 42 mm thread length
Obex Cortex 0272FR UltraBoard Jointing Tape (hereinafter 'jointing tape')	black woven glass fibre tape for jointing boards	150 mm by 25 m, 0.3mm thick, 8 rolls per box
Obex Cortex 0273FR UltraBoard Sealing Patches (hereinafter 'sealing patches')	black patches made from LDPE with reinforced scrim for sealing mechanical fixings' head	50 mm by 50 mm, 400 patches per roll

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:

- LGSF or STF supporting wall;
- Cortex 0814 Board Jointing Tape;
- Cortex Double-Sided Tape;
- Cortex UV Façade Tape;
- Interface Sealing Membrane (hereinafter 'ISM');
- Paste adhesive.

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

The supporting structure shall be structurally sound, designed and constructed in accordance with the requirements of the relevant national Building Regulations and Standards, namely:

- BS EN 1090-2;
- BS EN 1993-1-1;
- BS EN 1993-1-3;
- BS EN 1995-1-1;
- BS EN 14081-1.

During construction, the Product shall include:
- appropriate detailing with respect to damp proofing at penetrations, openings, eaves and sole plates;
- a drained cavity between the breather membrane and cladding. The width of the drained cavity is determined by the cladding finish and shall be a minimum of 15 mm.

Forming a weathertight barrier after installation of the Product can allow internal fitout and works to commence without issues caused by water ingress during adverse weather.

A condensation risk analysis shall be carried out at design stage, in accordance with BS 5250, and a vapour control layer (VCL) shall be incorporated on the warm side of the walls, if necessary.

LGSF and TF studs shall have minimum dimensions specified by a suitably qualified engineer and shall have a maximum spacing of 600 mm.

Studding and framing shall be adequately supported by noggins to ensure rigidity.

Use of the Product for direct render or brick slip applications is outside the scope of this Agrément.

Any external finishes/cladding applied shall be such that the cavity satisfies the minimum cavity width.

The Product is suitable for exposure during a typical construction period but must subsequently be protected from exposure to weather conditions.

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 2.2.10.

No pre-installation survey is required.

For the purpose of thermal transmittance (hereinafter 'U-value') calculations for a completed wall construction, and to determine if the requirements (of legislation or other statutes) are met, the thermal resistances of wall assemblies shall be calculated in accordance with BS EN ISO 6946 and BRE Report 443 as appropriate.

A gap of 3 to 5 mm shall be maintained between all board-to-board joints.

The Product can limit the water permeability of a wall once all open joints and penetrations are properly sealed using jointing tape - see Section 2.5.1.

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 can be undertaken by competent persons experienced in this type of work.

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.

The Product shall be:
- handled following safe handling guidelines;
- received palletised in a dry state, with pallets protected from weather by plastic sheeting or similar;
- stored flat on elevated pallets on a suitable firm, level surface, capable of accommodating imposed loads, in a well-ventilated, covered area, protected from rain, frost, humidity and damp;
- stacked on pallets no more than six pallets high.

Allow boards to acclimatise to ambient moisture and humidity conditions prior to installation.

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

The water vapour resistance and water permeability of the Product components are detailed in Section 2.5.1.

The fibre-cement board has adequate resistance to thermal shock in accordance with EAD 090062-00-0404 - see Section 2.5.1.

External walls incorporating the Product can adequately limit the risk of interstitial and surface condensation when designed and constructed in accordance with BS 5250 and BRE Report 262.

External walls shall be ventilated or vented, as required by the external façade design.

The Product shall be treated as a conventional sheathing board with regard to detailing and damp-proofing at openings, eaves and sole plates, and the fixing of wall ties.

2.2.8 Strength

Wind actions shall be calculated in accordance with BS EN 1991-1-4. Special consideration shall be necessary for locations with high wind-load pressure coefficients, as additional fixings may be necessary.

The Product:

- does not contribute to the racking resistance of supporting walls; supporting walls shall withstand racking forces through use of appropriate anchors, plates, braces and connections;
- has been tested in accordance with EAD 090062-00-0404 to obtain the ultimate wind load resistance value and the results are detailed in Section 2.5.2. In accordance with BS EN 1990, it is recommended that a partial load factor of 1.5 is used to determine the design wind load to be resisted by the completed wall - see Section 2.5.2;
- meets the requirements for Category B, Class 1 fibre-cement boards, in accordance with BS EN 12467 - see Section 2.5.1.

The qualified structural engineer shall ensure that the:

- supporting wall has adequate strength to resist all lateral (and any other) loads, no contribution may be assumed from the Product in this regard;
- maximum design load achieved by the Product shall be equal to or less than the design pull-out resistance strength of the mechanical fixings from the supporting wall, obtained from site tests.

Cladding support brackets and any other applied loads shall be fixed back through the Product to the supporting wall.

Impact resistance

When tested for hard and soft body impact resistance, in accordance with EAD 090062-00-0404, the fibre-cement board is categorised as Use Category I.

The Use Categories in accordance with EAD 090062-00-0404 are:

- I - a zone readily accessible at ground level to the public and vulnerable to hard-body impacts but not subjected to abnormally rough use;
- II - a zone liable to impacts from thrown or kicked objects, but in public locations where the height of the Product will limit the size of the impact; or at lower levels where access to the building is primarily to those with some incentive to exercise care;
- III - a zone not likely to be damaged by normal impacts caused by people or by thrown or kicked objects;
- IV - a zone out of reach from ground level.

2.2.9 Fire performance

The Product is classified as:

- European Classification A2-s1, d0, in accordance with BS EN 13501-1.
- non-combustible and is not subject to any restriction on building height or proximity to boundaries.

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 60-minute intervals thereafter. The fire resistance shall be confirmed by tests or assessments by a suitably accredited laboratory.

It is recommended that open joints between the Product are properly sealed using jointing tape.

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

Specifiers shall refer to the relevant national Building Regulations for detailed conditions of use regarding requirements for substrate fire performance, cavity closers and barriers, fire stopping of service penetrations and combustibility limitations for other materials (including thermal insulation and cladding) used in the overall wall construction).

2.2.10 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. Where relevant, consideration shall be given to the exposure zones where the Product is installed.

The Agrément holder declares that the Product may be exposed to the environment for a duration of 12 months before receiving cladding/finishes. However, this is dependent on the severity of environmental conditions to which the Product is subject, in addition to the product-specific design, execution and maintenance of the works. The Product shall be thoroughly inspected prior to installation of cladding/finishes. Any Product showing any visible signs of degradation or damage shall be replaced.

2.2.11 UKCA, UKNI and CE marking

The British and European standard for the Product is BS EN 12467.

2.3 EXAMPLES OF TYPICAL DETAILS

Diagram 1 - Typical detail of fixing layout

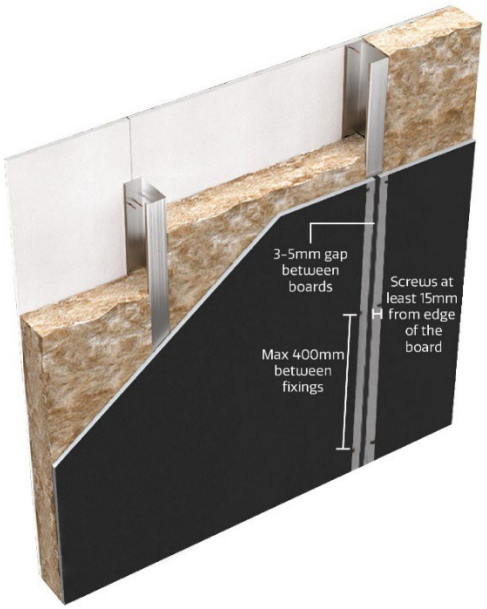
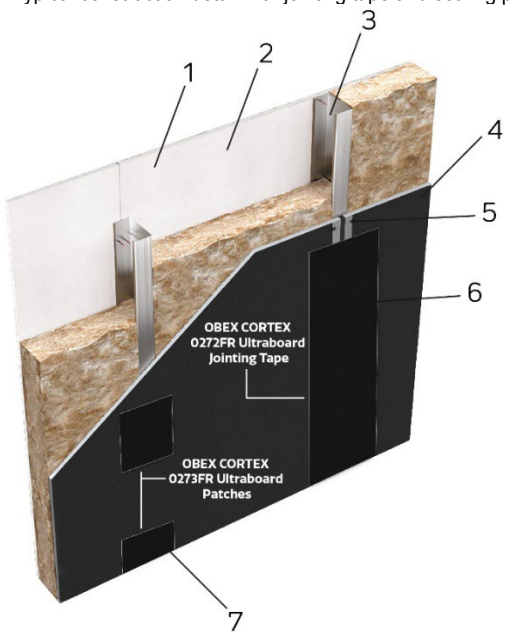


Diagram 2 - Typical construction detail with jointing tape and sealing patches



1. plasterboard
2. mineral wool
3. metal profiles
4. Product
5. mechanical fixings
6. jointing tape to cover joints
7. patches to cover fixing heads

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

No pre-installation survey is required.

2.4.2 Preparation

The following considerations apply before starting the work:

- the LGSF or TF supporting wall shall be correctly constructed and structurally sound.

The following works shall be undertaken before installing the Product:

- apertures for service penetrations shall be created using a hole saw allowing 10 mm clearance;
- the gap around services shall be sealed using a suitable sealant or proprietary collar;
- the Product will bend to a radius of 3 m. The radius shall be formed prior to installation;
- check that the edges of the Product are sound; discard damaged Product or cut away damaged edges;
- check the alignment of studs for level and plumb; ensure no members are distorted;
- the project-specific design may require reduced fixing centres, additional supports or support noggins;
- mark the project-specific dimensions on the Product and score with a sharp knife ensuring the mesh is cut; bend and snap along the initial cut, then use a knife to cut through the mesh on the reverse;
- fixings shall penetrate a minimum of 10 mm into steel studs or 25 mm into timber studs and shall sit flush with the Product surface; do not overtighten fixings.

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:

Exterior cladding

- studs/joists shall have a maximum spacing of 600 mm;
- ensure the edges of the Product are located on stud/joist centre lines;
- maintain a 3 to 5 mm gap between adjacent boards;

- mechanical fixings shall be:
  - a minimum of 15 mm from the perimeter of the Product;
  - at maximum 400 mm centres;
- install fixings starting from the centre of the Product, working towards ends and edges.

Internal lining
- studs shall have a maximum spacing of 600 mm;
- ensure the edges of the Product are located on stud centre lines;
- mechanical fixings shall be:
  - a minimum of 15 mm from the perimeter of the Product;
  - at maximum 400 mm centres;
  - at maximum 200 mm centres at internal and external corners or openings;
- install the second row of Product aligning horizontally and vertically with the first row of Product ensuring that vertical joints are offset by a minimum of one stud cavity.

2.4.4 Finishing
The following finishing is required on completion of the installation:
- ensure that all joints and fixing heads are clean and free from dust;
- cover all joints with jointing tape;
- cover all fixing heads with sealing patches;
- finishes to be applied in accordance with the instructions of the manufacturer/specifier (outside of the scope of this Agrément).

2.5 INDEPENDENTLY ASSESSED PRODUCT CHARACTERISTICS

2.5.1 Moisture control

Test	Product/Component	Standard	Result
Water impermeability	fibre-cement board	BS EN 12467	pass
Water vapour diffusion resistance factor, μ		BS EN ISO 12572	40.9
Water vapour diffusion equivalent air thickness, S_d			0.502
Water absorption		EAD 210024-00-0504	11 %
Hygrothermal conditioning (thermal shock)		EAD 090062-00-0404	no defects
Water vapour diffusion-equivalent air layer thickness, S_d	breather membrane	BS EN 1931	0.04 m
Water penetration		BS EN 13111	W2
Watertightness^ (including joints)	Product	BS EN 1027	No leakage at window reveal or joint
Air permeability^ at +600Pa and -600Pa (including joints)		BS EN 1026	Class 4

^ specimen consisted of Product, 400 mm by 600 mm PVC-U window, 0500FR ISM with 0771FR Paste Adhesive, 0200FR ISM with 0210FR Paste Adhesive, Cortex 0272FR UltraBoard Jointing Tape, Cortex 0273FR UltraBoard Sealing Patches and Cortex 0290FR Mechanical fixings

2.5.2 Strength

Test		Product/Component	Standard	Result
Wind load resistance (design load)	400 mm fixings centers^	fibre-cement board	EAD 090062-00-0404	0.867 kPa
	300 mm fixings centers^^			1 kPa
Hard body impact				Use Category I
Soft body impact				Use Category I (60 J)
Bending strength, modulus of rupture			BS EN 12467	5.03 MPa (Class 1)
Compressive strength ($f_{c,k}$)	perpendicular		BS EN 789	2.32 N/mm^2
	parallel			2.28 N/mm^2
Compressive modulus of elasticity ($E_{c,mean}$)	perpendicular			1,800 N/mm^2
	parallel			2,233 N/mm^2
Tensile strength	longitudinal	breather membrane	BS EN 12311-1	3,828 N/50 mm
	transverse			1,992 N/50mm
Tear resistance	longitudinal		BS EN 12310-1	356 N
	transverse			424 N
Peel resistance	control specimens	Product	BS EN ISO 8510-2	29.77 N
	aged specimens			29.41 N

^ design load with partial load factor 1.5; specimen consisted of Product, mechanically fixed at 600 mm horizontal and at 400 mm vertical centres to 100 mm by 50 mm by 1.2 mm thick cold rolled steel studs at 600 mm centres

^^ design load with partial load factor 1.5; specimen consisted of Product, mechanically fixed at 600 mm horizontal and at 300 mm vertical centres to 100 mm by 50 mm by 1.2 mm thick cold rolled steel studs at 600 mm centres

2.5.3 Fire performance

Test		Product/Component	Standard	Result
Reaction to fire classification		Product	BS EN 13501-1	A2-s1,d0
Fire resistance§	on exposed side^		BS EN 13501-2	EI 120
	on unexposed side^^			EI 90

^ specimen consisted of Product with Obex Cortex 0290FR mechanical fixings at 250 mm spacing centres, 75 mm thick mineral wool insulation, two layers of 12.5 mm thick British Gypsum plasterboard, Frameclad steel studs at 600 mm centres

^^ specimen consisted of Product with Obex Cortex 0290FR mechanical fixings at 250mm spacing centres, 75 mm thick mineral wool insulation, two layers of 12.5 mm thick British Gypsum plasterboard, Kingspan steel studs at 600 mm centres

§ extra testing available upon request, which falls outside the scope of this Agrément

2.5.4 Thermal performance

Test	Product/Component	Standard	Result
Thermal conductivity (λ)	fibre-cement board	BS EN 12664 and ISO 8302	0.223 W/mK

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

- A1 Loading - the Product can withstand wind pressures and bending when used and fixed as recommended
- B3(1) Internal fire spread (structure) - the Product can inhibit the spread of a fire within a building
- B3(4) Internal fire spread (structure) - the Product can adequately resist the spread of fire and smoke within the cavity
- C2(b) Resistance to moisture - the Product can contribute to resisting the passage of moisture when adequately installed
- C2(c) Resistance to moisture - the Product can contribute to limiting the risk of surface and interstitial condensation
- Regulation 7(1) Materials and workmanship - the Product is manufactured from suitably safe and durable materials for its application and can be installed to give a satisfactory performance provided it is installed in accordance with the requirements of this Agrément
- Regulation 7(2) Materials and workmanship - the Product can contribute to satisfying this Requirement

3.2.2 Wales

The Building Regulations 2010 and subsequent amendments

- A1 Loading - the Product can withstand wind pressures and bending when used and fixed as recommended
- B3(1) Internal fire spread (structure) - the Product can inhibit the spread of a fire within a building
- B3(4) Internal fire spread (structure) - the Product can adequately resist the spread of fire and smoke within the cavity
- C2(b) Resistance to moisture - the Product can contribute to resisting the passage of moisture when adequately installed
- C2(c) Resistance to moisture - the Product can contribute to limiting the risk of surface and interstitial condensation
- Regulation 7(1) Materials and workmanship - the Product is manufactured from suitably safe and durable materials for its application and can be installed to give a satisfactory performance provided it is installed in accordance with the requirements of this Agrément
- Regulation 7(2) Materials and workmanship - the Product 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)(2) Durability, workmanship and fitness of materials

- the Product is manufactured from suitably safe and durable materials for its application and can be installed to give a satisfactory performance provided it is installed in accordance with the requirements of this Agrément

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

- the Product can contribute to satisfying this Requirement

3.2.3.3 Regulation 9 Building Standards - Construction

- 1.1 Structure - the Product can withstand wind pressures and bending to which it is subjected in the ordinary course of its use for the purpose for which it was intended
- 2.4 Cavities - the Product can contribute to inhibiting the unseen spread of fire and smoke within concealed spaces
- 2.5 Internal lining - the internal linings shall inhibit the spread of fire within a building
- 3.10 Precipitation - the Product can contribute to resisting precipitation penetrating to the inner face of the building
- 3.15 Condensation - the Product can contribute to limiting the risk of interstitial condensation
- 7.1(a)(b) Statement of sustainability - the Product can contribute to satisfying the relevant Requirements of Regulation 9, Standards 1 to 6, and therefore can 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)(a)(i)(iii)(b) Fitness of materials and workmanship - the Product is manufactured from suitably safe and durable materials for its application and can be installed to give a satisfactory performance provided it is installed in accordance with the requirements of this Agrément
- 23(2) Fitness of materials and workmanship - the Product can contribute to satisfying this Requirement
- 28(b) Resistance to moisture and weather - the Product can be constructed to prevent the passage of moisture from the weather
- 29 Condensation - the Product can contribute to limiting the risk of interstitial condensation
- 30 Stability - the Product can withstand wind pressures and bending when used and fixed as intended
- 34 Internal fire spread -Linings - the internal linings shall inhibit the spread of fire within a building
- 35(1) Internal fire spread - Structure - the Product can inhibit the spread of a fire within a building
- 35(4) Internal fire spread - Structure - the Product can adequately resist the spread of fire and smoke within the cavity

3.3 THIRD-PARTY ACCEPTANCE

In the opinion of Kiwa Ltd. if installed, used, and maintained in accordance with this Agrément, this Product can satisfy the appropriate structural, fire, moisture and durability requirements of a Structural Warranty provider. Please contact the relevant Structural Warranty provider to ascertain their project-specific design requirements and to confirm their acceptance on a case-by-case basis.

4 SOURCES

- BS EN ISO 6946:2017 Building components and building elements. Thermal resistance and thermal transmittance. Calculation methods
- BS EN ISO 8510-2:2010 Adhesives. Peel test for a flexible-bonded-to-rigid test specimen assembly - 180 degree peel
- BS EN ISO 9001:2015 Quality management systems. Requirements
- BS EN ISO 12572:2016 Hygrothermal performance of building materials and products. Determination of water vapour transmission properties. Cup method
- BS EN 789:2004 Timber structures. Test methods. Determination of mechanical properties of wood based panels
- BS EN 1026:2016 Windows and doors. Air permeability. Test method
- BS EN 1027:2016 Windows and doors. Water tightness. Test method
- BS EN 1090-2:2018+A1:2024 Execution of steel structures and aluminium structures - Technical requirements for steel structures
- BS EN 1931:2000 Flexible sheets for waterproofing. Bitumen, plastic and rubber sheets for roof waterproofing. Determination of water vapour transmission properties
- BS EN 1990:2002+A1:2005 Eurocode. Basis of structural design
- NA to BS EN 1990:2002+A1:2005 UK National Annex for Eurocode. Basis of structural design
- BS EN 1991-1-4:2005+A1:2010 Eurocode 1. Actions on structures - General actions - Wind actions
- NA to BS EN 1991-1-4:2005+A1:2010 UK National Annex to Eurocode 1. Actions on structures - General actions - Wind actions
- 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 12310-1:2000 Flexible sheets for waterproofing. Determination of resistance to tearing (nail shank) - Bitumen sheets for roof waterproofing
- BS EN 12311-1:2000 Flexible sheets for waterproofing. Determination of tensile properties - Bitumen sheets for roof waterproofing
- BS EN 12467:2012+A2:2018 Fibre-cement flat sheets. Product specification and test methods
- BS EN 12664: 2001 Thermal performance of building materials and products. Determination of thermal resistance by means of guarded hot plate and heat flow meter methods. Dry and moist products of medium and low thermal resistance
- BS EN 13111:2010 Flexible sheets for waterproofing. Underlays for discontinuous roofing and walls. Determination of resistance to water penetration
- BS EN 13501-1:2018 Fire classification of construction products and building elements - Classification using data from reaction to fire tests
- BS EN 13501-2:2023 Fire classification of construction products and building elements - Classification using data from fire resistance and/or smoke control tests, excluding ventilation services
- BS EN 13859-2:2014 Flexible sheets for waterproofing. Definitions and characteristics of underlays - Underlays for walls
- 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 8000-0:2014+A1:2024 Workmanship on construction sites - Introduction and general principles
- BRE Report 262:2002 Thermal insulation: avoiding risks. Third edition
- BRE Report 443:2019 Conventions for U-value calculations
- EAD 090062-00-0404:2018 Kits for external wall claddings mechanically fixed
- EAD 210024-00-0504:2018 Cement bonded board
- ISO 8302:1991 Thermal insulation. Determination of steady-state thermal resistance and related properties. Guarded hot plate apparatus

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	A Chapman	C Devine	December 2024

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