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Agrément Certificate

23/6884

Product Sheet 5 Issue 1

UNILIN SAFE-R INSULATION

UNILIN SAFE-R SOFFIT (SR/ST) AND SAFE-R SOFFIT PLUS (SR/STP)

This Agrément Certificate Product Sheet⁽¹⁾ relates to Unilin Safe-R Soffit (SR/ST) and Safe-R Soffit Plus (SR/STP), rigid phenolic foam (PF) boards with a perforated composite foil-facing on both sides. Safe-R Soffit Plus (SR/STP) is adhesively bonded to a magnesium oxide or calcium silicate board (on one side). The products are for use as directly fixed soffit insulation for semi-exposed concrete floor decks in car parks, storage areas, loading bays and similar areas beneath new and existing domestic and non-domestic buildings.

(1) Hereinafter referred to as 'Certificate'.

The assessment includes

Product factors:

- compliance with Building Regulations
- compliance with additional regulatory or non-regulatory information where applicable
- evaluation against technical specifications
- assessment criteria and technical investigations
- uses and design considerations

Process factors:

- compliance with Scheme requirements
- installation, delivery, handling and storage
- production and quality controls
- maintenance and repair

Ongoing contractual Scheme elements†:

- regular assessment of production
- formal 3-yearly review

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

On behalf of the British Board of Agrément

Date of issue: 21 June 2024



KEY FACTORS ASSESSED

- Section 1. Mechanical resistance and stability
- Section 2. Safety in case of fire
- Section 3. Hygiene, health and the environment
- Section 4. Safety and accessibility in use
- Section 5. Protection against noise
- Section 6. Energy economy and heat retention
- Section 7. Sustainable use of natural resources
- Section 8. Durability

Hardy Giesler
Chief Executive Officer

This BBA Agrément Certificate is issued under the BBA's Inspection Body accreditation to ISO/IEC 17020. Sections marked with † are not issued under accreditation.

The BBA is a UKAS accredited Inspection Body (No. 4345), Certification Body (No. 0113) and Testing Laboratory (No. 0357).

Readers MUST check that this is the latest issue of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.

The Certificate should be read in full as it may be misleading to read clauses in isolation.

Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.

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SUMMARY OF ASSESSMENT AND COMPLIANCE

This section provides a summary of the assessment conclusions; readers should refer to the later sections of this Certificate for information about the assessments carried out.

Compliance with Regulations

Having assessed the key factors, the opinion of the BBA is that Unilin Safe-R Soffit (SR/ST) and Safe-R Soffit Plus (SR/STP), if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations:



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

Requirement:	A1	Loading
Comment:		The products can contribute to satisfying this Requirement. See section 1 of this Certificate.
Requirement:	B2(1)	Internal fire spread (linings)
Comment:		The products are unrestricted by this Requirement. See section 2 of this Certificate.
Requirement:	C2(c)	Resistance to moisture
Comment:		The products can contribute to satisfying this Requirement. See section 3 of this Certificate.
Requirement:	L1(a)(i)	Conservation of fuel and power
Comment:		The products can contribute to satisfying this Requirement; however, compensating fabric measures may be required. See section 6 of this Certificate.
Regulation:	7(1)	Materials and workmanship
		The products are acceptable. See sections 8 and 9 of this Certificate.
Regulation:	25B	Nearly zero-energy requirements for new buildings
Regulation:	26	CO₂ emission rates for new buildings
Regulation:	26A	Fabric energy efficiency rates for new dwellings (applicable to England only)
Regulation:	26A	Primary energy rates for new buildings (applicable to Wales only)
Regulation:	26B	Fabric performance values for new dwellings (applicable to Wales only)
Regulation:	26C	Target primary energy rates for new buildings (applicable to England only)
Regulation:	26C	Energy efficiency rating (applicable to Wales only)
Comment:		The products can contribute to satisfying these Regulations; however, compensating fabric/service measures may be required. See section 6 of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)	Fitness and durability of materials and workmanship
Comment:		The products are acceptable. See sections 8 and 9 of this Certificate.
Regulation:	9	Building standards – construction
Standard:	1.1(b)	Structure
Comment:		The products can contribute to satisfying this Standard, with reference to clauses 1.1.1 ⁽¹⁾⁽²⁾ , 1.1.2 ⁽¹⁾⁽²⁾ and 1.1.3 ⁽¹⁾⁽²⁾ . See section 1 of this Certificate.
Standard:	2.5	Internal linings
Comment:		The products are unrestricted under this Standard, with reference to clause 2.5.1 ⁽¹⁾⁽²⁾ . See section 2 of this Certificate.

Standard: Comment:	3.15	Condensation The products can contribute to satisfying this Standard, with reference to clauses 3.15.1 ⁽¹⁾⁽²⁾ , 3.15.4 ⁽¹⁾⁽²⁾ and 3.15.5 ⁽¹⁾⁽²⁾ . See section 3 of this Certificate.
Standard: Comment:	6.1(b)(c)	Energy demand The products can contribute to satisfying this Standard, with reference to clauses 6.1.1 ⁽¹⁾ and 6.1.2 ⁽²⁾ ; however, compensating fabric/service measures may be required. See section 6 of this Certificate.
Standard: Comment:	6.2	Building insulation envelope The products can contribute to satisfying these Standards, with reference to clauses, or parts of, 6.2.1 ⁽¹⁾⁽²⁾ , 6.2.3 ⁽¹⁾ , 6.2.4 ⁽²⁾ , 6.2.6 ⁽¹⁾ , 6.2.7 ⁽¹⁾⁽²⁾ , 6.2.8 ⁽¹⁾⁽²⁾ , 6.2.9 ⁽¹⁾⁽²⁾ , 6.2.10 ⁽¹⁾⁽²⁾ , 6.2.11 ⁽²⁾ and 6.2.12 ⁽¹⁾ ; however, compensating fabric measures may be required. See section 6 of this Certificate.
Standard: Comment:	7.1(a)(b)	Statement of sustainability The products can contribute to satisfying the relevant requirements of Regulation 9, Standards 1 to 6, and therefore will contribute to a construction meeting at least a bronze level of sustainability as defined in this Standard.
Regulation: Comment:	12	Building standards – conversion Comments in relation to the product under Regulation 9, Standards 1 to 6, also apply to this Regulation, with reference to clause 0.12.1 ⁽¹⁾⁽²⁾ and Schedule 6 ⁽¹⁾⁽²⁾ .
		(1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).



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

Regulation: Comment:	23(1)(a)(i) (iii)(b)(i)(ii)	Fitness of materials and workmanship The products are acceptable. See sections 8 and 9 of this Certificate.
Regulation: Comment:	29	Condensation The products can contribute to satisfying this Regulation. See section 3 of this Certificate.
Regulation: Comment:	30	Stability The products can contribute to satisfying this Regulation. See section 1 of this Certificate.
Regulation: Comment:	34	Internal fire spread – linings The products are unrestricted by this Regulation. See section 2 of this Certificate.
Regulation: Comment:	39(a)(i)	Conservation measures The products can contribute to satisfying this Regulation; however, compensating fabric measures may be required. See section 6 of this Certificate.
Regulation: Regulation: Regulation: Comment:	40(2) 43(1)(2) 43B	Target carbon dioxide emission rate Renovation of thermal elements Nearly zero-energy requirements for new buildings The products can contribute to satisfying these Regulations; however, compensating fabric/service measures may be required. See section 6 of this Certificate.

Fulfilment of Requirements

The BBA has judged Unilin Safe-R Soffit (SR/ST) and Safe-R Soffit Plus (SR/STP) to be satisfactory for use as described in this Certificate. The products have been assessed for use as directly fixed soffit insulation for semi-exposed concrete floor decks in car parks, storage areas, loading bays and similar areas beneath new and existing domestic and non-domestic buildings.

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the products under assessment. Unilin Safe-R Soffit (SR/ST) and Safe-R Soffit Plus (SR/STP) consist of:

- Safe-R Soffit (SR/ST) — a rigid phenolic foam board, with a perforated composite foil-facing on both sides
- Safe-R Soffit Plus (SR/STP) — a rigid phenolic foam board, with a perforated composite foil-facing on both sides, adhesively bonded to a magnesium oxide or calcium silicate board on one side.

The products have the nominal characteristics given in Table 1.

Table 1 Nominal characteristics

Characteristic (unit)	Value	
	Safe-R Soffit (SR/ST)	Safe-R Soffit Plus (SR/STP)
Length (mm)	2400	2400
Width (mm)	1200	1200
Insulation thickness (mm) ⁽¹⁾	40 to 150 (in 5 mm increments)	40 to 150 (in 5 mm increments)
Magnesium oxide or calcium silicate board thickness (mm)	–	6
Edge profile	Square	Square

(1) Phenolic foam board only. For Safe-R Soffit Plus (SR/STP), the calcium silicate or magnesium oxide board adds 6 mm to the overall product thickness.

Ancillary Items

The Certificate holder recommends stainless steel fixings with a shank diameter of minimum 5.2 mm, and a head diameter of minimum 35 mm, as ancillary items for use with the products, but these materials have not been assessed by the BBA and are outside the scope of this Certificate.

Product assessment – key factors

The products were assessed for the following key factors, and the outcome of the assessments is shown below. Conclusions relating to the Building Regulations apply to the whole of the UK unless otherwise stated.

1 Mechanical resistance and stability

Data were assessed for the following characteristics.

1.1 Wind loading

1.1.1 The products were assessed against performance values appropriate to the principles of BS EN 1991-1-4 : 2005 and its UK National Annex. Results of the wind load resistance tests are given in Tables 2 to 4.

1.1.2 The resistance forces data given in Tables 2 to 4 are the results of calculations based upon pull-through resistances determined by the BBA from tests on stainless steel anchors with 35 mm diameter plates.

Table 2 Data for calculation of wind load capacity – Safe-R Soffit SR/ST

Factor (unit)	Product ⁽¹⁾		
Product thickness (mm)	All		
Characteristic pull-through resistance ⁽²⁾⁽³⁾ (per anchor) (N)	Centre	Edge	Corner
	558	625	375
Partial material factor	3	3	3
Design pull-through resistance ⁽⁴⁾ (N)	186	208	125

(1) Calculation based on insulation board 2.4 m by 1.2 m (total area 2.88 m²) attached by 12 fixings (ie, 4.16 fixings per m²).

(2) Tested in accordance with ETAG 034 : 2012, Section 5.4.2.1.1 – *Pull-through resistance of cladding element*.

(3) Pull-through resistance of the product over the head of the fixing (see section 9.1.3).

(4) The partial material factor of 3 is applied and based on the assumption that all boards are quality control tested to ensure consistency of the tensile strength perpendicular to the face of the board.

Table 3 Data for calculation of wind load capacity – Safe-R Soffit Plus SR/STP with magnesium oxide board

Factor (unit)	Product ⁽¹⁾		
Product thickness (mm)	All		
Characteristic pull-through resistance ⁽²⁾⁽³⁾ (per anchor) (N)	Centre	Edge	Corner
	619	530	704
Partial material factor	3	3	3
Design pull-through resistance ⁽⁴⁾ (N)	206	177	235

(1) Calculation based on insulation board 2.4 m by 1.2 m (total area 2.88 m²) attached by 12 fixings (ie, 4.16 fixings per m²).

(2) Tested in accordance with ETAG 034 : 2012, Section 5.4.2.1.1 – *Pull-through resistance of cladding element*.

(3) Pull-through resistance of the product over the head of the fixing (see section 9.1.3).

(4) The partial material factor of 3 is applied and based on the assumption that all boards are quality control tested to ensure consistency of the tensile strength perpendicular to the face of the board.

Table 4 Data for calculation of wind load capacity – Safe-R Soffit Plus SR/STP with calcium silicate board

Factor (unit)	Product ⁽¹⁾		
Product thickness (mm)	All		
Characteristic pull-through resistance ⁽²⁾⁽³⁾ (per anchor) (N)	Centre	Edge	Corner
	785	608	519
Partial material factor	3	3	3
Design pull-through resistance ⁽⁴⁾ (N)	262	203	173

(1) Calculation based on insulation board 2.4 m by 1.2 m (total area 2.88 m²) attached by 12 fixings (ie, 4.16 fixings per m²).

(2) Tested in accordance with EAD 090062-00-0404 : 2018, Annex I.1.

(3) Pull-through resistance of the product over the head of the fixing (see section 9.1.3).

(4) The partial material factor of 3 is applied and based on the assumption that all boards are quality control tested to ensure consistency of the tensile strength perpendicular to the face of the board.

1.1.3 The products were tested for bending strength and shear resistance, and the results are given in Table 5.

Table 5 Bending strength and shear resistance

Product assessed	Assessment method	Requirement	Result
Unilin Safe-R Soffit (SR/ST)	Tensile strength perpendicular to faces to BS EN 1607 : 1997	Value achieved	Maximum load 447 N
			Tensile stress at max. load 45 kPa
Unilin Safe-R Soffit Plus (SR/STP) with magnesium oxide board	Bending strength to BS EN 12089 : 2013	Value achieved	Maximum load 1014 N
			Flexural stress 1109 kPa
	Adhesion/cohesion to BS EN 13950 : 2014		Deflection at max. load 8.5 mm
			Maximum load 454 N
Unilin Safe-R Soffit Plus (SR/STP) with calcium silicate board	Bending strength to BS EN 12089 : 2013	Value achieved	Tensile stress at max. load 45 kPa
			Maximum load 999 N
	Adhesion/cohesion to BS EN 13950 : 2014		Flexural stress 944 kPa
			Flexural modulus 35 MPa
			Maximum load 383 N
			Tensile stress at max. load 38 kPa

1.1.4 The products are mechanically fixed to the structural floor with a minimum of 12 fixings per board, with the fixing pattern as shown in Figure 1.

1.1.5 On the basis of data assessed, when attached to a structural floor with an appropriate number of fixings, the products can adequately resist the design loads applicable in the UK (see sections 9.1.4 to 9.1.6 of this Certificate).

2 Safety in case of fire

Data were assessed for the following characteristics.

2.1 Reaction to fire

2.1.1 The products were tested for reaction to fire and the classification is given in Table 6.

Table 6 Reaction to fire classification

Product assessed	Assessment method	Requirement	Result
Unilin Safe-R Soffit (SR/ST) Phenolic insulation	NF EN 13501-1 : 2013	Value achieved	C-s1,d0
Unilin Safe-R Soffit Plus (SR/STP) with magnesium oxide board	NF EN 13501-1 : 2018		B-s1,d0 ⁽¹⁾
Unilin Safe-R Soffit Plus (SR/STP) with calcium silicate board	BS EN 13501-1 : 2018		B-s1,d0 ⁽²⁾

(1) Crepim, Report no. DO-23-5366/A1-R1, 13 November 2023. Copies of the report can be obtained from the Certificate holder on request. The classification is valid for thicknesses of 46 to 156 mm.

(2) Efectis, Report no. EUI-23-000243, 9 November 2023. Copies of the report can be obtained from the Certificate holder on request. The classification is valid for thicknesses of 40 to 150 mm.

2.1.2 On the basis of data assessed, the products, when used as soffit insulation for semi-exposed floor decks, will be unrestricted under the documents supporting the national Building Regulations in relation to internal fire spread over linings.

2.1.3 If the products are painted or covered, the performance is outside the scope of this Certificate and the reaction to fire classification and permissible area of use must be determined in accordance with the documents supporting the national Building Regulations.

2.1.4 Designers must refer to the relevant national Building Regulations and guidance for detailed conditions of use, particularly in respect of requirements for substrate fire performance, cavity closers and barriers, fire stopping of service penetrations and combustibility limitations for other materials and components used in the overall floor construction.

2.2 Resistance to fire

Where the products are incorporated in a floor construction where fire resistance is required by the documents supporting the national Building Regulations, the fire resistance must be confirmed by a suitably experienced and competent individual.

3 Hygiene, health and the environment

Data were assessed for the following characteristics.

3.1 Water vapour permeability

3.1.1 The products were tested for water vapour resistivity and resistance and the results are given in Table 7.

Product assessed	Assessment method	Requirement	Result
Phenolic foam	BS EN 12086 : 1997	Value achieved	171 MN·s·g ⁻¹ ·m ⁻¹
Composite foil-facing perforated	PN EN 12086 : 2001 (Set C)		4.77 MN·s·g ⁻¹
Magnesium oxide board	BS EN 12086 : 1997		1.33 MN·s·g ⁻¹
Calcium silicate board	BS EN 12572 : 2016		0.54 MN·s·g ⁻¹

3.1.2 For the purposes of assessing the risk of condensation, the water vapour resistance and water vapour resistivity values may be taken as stated in Table 7.

4 Safety and accessibility in use

Not applicable.

5 Protection against noise

Not applicable.

6 Energy economy and heat retention

Data were assessed for the following characteristics.

6.1 Thermal conductivity

The products were tested for thermal conductivity and thermal resistance, and the results are given in Table 8.

Product assessed	Thickness	Assessment method	Requirement	Result
Unilin Safe-R Soffit (SR/ST)	40 to 99	Thermal conductivity to	Declared value	0.020 W·m ⁻¹ ·K ⁻¹
Phenolic insulation ⁽¹⁾	100 to 150	BS EN 13166 : 2012	(λ _D)	0.021 W·m ⁻¹ ·K ⁻¹
Calcium silicate board	6 mm	Thermal resistance to	Declared value	0.028 m ² ·K·W ⁻¹
Magnesium oxide board		BS EN 12667 : 2001		0.033 m ² ·K·W ⁻¹

(1) The λ_D of the foil faced phenolic core of Safe-R Soffit Plus (SR/STP) is the same as Safe-R Soffit (SR/ST).

6.2 Conservation of fuel and power

6.2.1 The U value of a completed soffit will depend on the insulation thickness, and its structure. Example U values are given in Table 9.

Table 9 Example U values for SR/ST and SR/STP fixed directly to the uninsulated floor

Target U value (W·m ⁻² ·K ⁻¹)	Insulation thickness (mm)	
	Unilin Safe-R Soffit (SR/ST) ⁽¹⁾	Unilin Safe-R Soffit Plus (SR/STP) ⁽²⁾
0.11	— ⁽³⁾	— ⁽³⁾
0.12	— ⁽³⁾	— ⁽³⁾
0.13	— ⁽³⁾	156
0.15	130	136
0.18	110	116
0.22	95	101
0.25	80	86

(1) Construction (internal to external): 150 mm reinforced concrete deck with 2% steel ($\lambda = 2.5 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$) and Unilin Safe-R Soffit (SR/ST). Insulation secured using 4.17 stainless steel fixings per m², $\lambda = 17 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ and with a cross-sectional area of 21.24 mm².

(2) Construction (internal to external): 150 mm reinforced concrete deck with 2% steel ($\lambda = 2.5 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$) and Unilin Safe-R Soffit Plus (SR/STP) (insulation + 6 mm calcium silicate board or magnesium oxide board). Insulation secured using 4.17 stainless steel fixings per m², $\lambda = 17 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ and with a cross-sectional area of 21.24 mm².

(3) See section 6.2.3.

6.2.2 On the basis of data assessed, the products can contribute towards a floor construction satisfying the national Building Regulations in respect of energy economy and heat retention.

6.2.3 For improved energy or carbon savings, designers must consider appropriate fabric/service measures.

7 Sustainable use of natural resources

Not applicable.

8 Durability

8.1 The potential mechanisms for degradation and the known performance characteristics of the materials in these products were assessed.

8.2 Specific test data were assessed for the following.

Table 10 Dimensional stability

Product assessed	Assessment method	Requirement	Result
Unilin Safe-R Soffit (SR/ST) Phenolic insulation	Dimensional stability to BS EN 1604 : 1996 (70°C and 90% RH for 48 hours)	Declared value	DS(70,90)
	Dimensional stability to BS EN 1604 : 1996 (-20°C for 48 hours)		

8.3 Service life

Under normal service conditions, the products will have a life equivalent to the structure in which they are incorporated, provided they are designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions.

Information provided by the Certificate holder was assessed for the following factors:

9 Design, installation, workmanship and maintenance

9.1 Design

9.1.1 The design process was assessed by the BBA, and the following requirements apply in order to satisfy the performance assessed in this Certificate.

9.1.2 Positive wind load (pressure) is transferred to the substrate directly via bearing and compression of the products.

9.1.3 Negative wind load (suction) is resisted by the stainless steel fixings which retain the products.

9.1.4 The wind loads on the structural floor must be calculated by a suitably experienced and competent individual in accordance with the principles of BS EN 1991-1-4 : 2005 and its UK National Annex. Special consideration must be given to locations with high wind-load pressure coefficients as additional fixings may be necessary. In accordance with BS EN 1990 : 2002 and its National Annex, it is recommended that a load factor of 1.5 is used to determine the ultimate wind load to be resisted by the products.

9.1.5 Assessment of structural performance for individual buildings must be carried out by a suitably experienced and competent individual to confirm that:

- the structural floor is designed in accordance with the principles of BS EN 1991-1-1 : 2002 and BS EN 1992-1-1 : 2004, and has adequate strength to resist any additional loads that may be applied as a result of installing the products
- the proposed products and associated fixing layout provide adequate resistance to negative wind loads (based on the results of the site investigation)
- an appropriate number of site-specific pull-out tests are conducted on the substrate of the building to determine the minimum resistance to failure of the fixings. The characteristic pull-out resistance must be determined in accordance with the guidance given in EAD 330196-00-0604 : 2016 and EOTA Technical Report TR051 : 2018.

9.1.6 The number and centres of fixings must be determined by a suitably experienced and competent individual. Provided the structural floor is suitable and an appropriate fixing and depth of embedment is selected, the mechanical fixings will transfer the weight of the products to the structural floor.

9.1.7 Care must be taken in the detailing of the products at the floor perimeter to ensure adequate protection against precipitation. The product edges must be adequately sealed from precipitation; the Certificate holder can advise of suitable materials for this purpose, but such advice and products are outside the scope of this Certificate.

9.1.8 Recessed lighting must not be used.

9.1.9 Calculations of the thermal transmittance (U value) of a floor must be carried out in accordance with BS EN ISO 6946 : 2017 and BRE Report BR 443 : 2019.

9.1.10 Care must be taken in the overall design and construction of junctions with other elements and openings to minimise thermal bridges and air infiltration, and the detailed guidance found in the documents supporting the national Building Regulations must be followed.

Interstitial condensation

9.1.11 Floors will adequately limit the risk of interstitial condensation when they are designed and constructed in accordance with BS 5250 : 2021 and the relevant guidance.

9.1.12 When designing buildings with humidity class higher than 'humidity class 3', an assessment will need to be made, in accordance with BS EN 15026 : 2023 using the values given in Table 7, and the result will be construction and location specific.

Surface condensation

9.1.13 In England and Wales, floors will adequately limit the risk of surface condensation when the thermal transmittance (U value) does not exceed $0.7 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$ at any point, and the junctions with walls are designed in accordance with the guidance referred to in section 9.1.10 of this Certificate.

9.1.14 For buildings in Scotland, floors will adequately limit the risk of surface condensation when the thermal transmittance (U value) does not exceed $1.2 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$ at any point, and floors are designed and constructed in accordance with the relevant parts of BS 5250 : 2021 and this Certificate. Further guidance may be obtained from BRE Report BR 262 : 2002 and section 9.1.10 of this Certificate.

9.2 Installation

9.2.1 Installation instructions provided by the Certificate holder were assessed and judged to be appropriate and adequate.

9.2.2 Installation must be carried out in accordance with this Certificate and the Certificate holder's instructions. A summary of instructions and guidance is provided in Annex A of this Certificate.

9.2.3 Existing constructions must be in a good state of repair, with no evidence of rain penetration or damp. Defects must be made good prior to installation.

9.2.4 De-rating of electric cables must be considered in areas where the product restricts the flow of air.

9.3 Workmanship

Practicability of installation was assessed by the BBA on the basis of the Certificate holder's information. To achieve the performance described in this Certificate, installation of the products must be carried out by a competent general builder, or a contractor, experienced with this type of product.

9.4 Maintenance and repair

The products do not require maintenance. Minor surface damage can be repaired with proprietary fillers. Major damage may require the replacement of panels. The Certificate holder can advise on suitable measures for a particular application, but such advice is outside the scope of this Certificate.

10 Manufacture

10.1 The production processes for the products have been assessed, and provide assurance that the quality controls are satisfactory according to the following factors:

10.1.1 The manufacturer has provided documented information on the materials, processes, testing and control factors.

10.1.2 The quality control operated over batches of incoming materials has been assessed and deemed appropriate and adequate.

10.1.3 The quality control procedures and product testing to be undertaken have been assessed and deemed appropriate and adequate.

10.1.4 The process for management of non-conformities has been assessed and deemed appropriate and adequate.

10.1.5 An audit of each production location was undertaken, and it was confirmed that the production process was in accordance with the documented process, and that equipment has been properly tested and calibrated.

† 10.2 The BBA has undertaken to review the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

11 Delivery and site handling

11.1 The Certificate holder stated that the products are delivered to site in packaging bearing the product name and characteristics, Certificate holder's name, batch number, year of manufacture and the BBA logo incorporating the number of this Certificate.

11.2 Delivery and site handling must be performed in accordance with the Certificate holder's instructions and this Certificate, including:

11.2.1 The products must be protected from prolonged exposure to sunlight and must be stored either under cover or protected with opaque polythene sheeting. Where possible, packs should be stored inside. If outside, the products must be stacked flat, and raised above ground level, away from contact with ground moisture.

11.2.2 The products must not be exposed to open flame or other ignition sources, or to solvents or other chemicals.

11.2.3 When using power saws and sanders for cutting, dust extraction equipment must be used to control dust levels. The occupational exposure limit for both the calcium silicate board and the magnesium oxide board must not exceed the figures given in EH40/2005 : *Workplace exposure limits*.

ANNEX A – SUPPLEMENTARY INFORMATION †

Supporting information in this Annex is relevant to the products but has not formed part of the material assessed for the Certificate.

Construction (Design and Management) Regulations 2015

Construction (Design and Management) Regulations (Northern Ireland) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

CE marking

The Certificate holder has taken the responsibility of CE marking the products in accordance with harmonised European Standard EN 13166 : 2012.

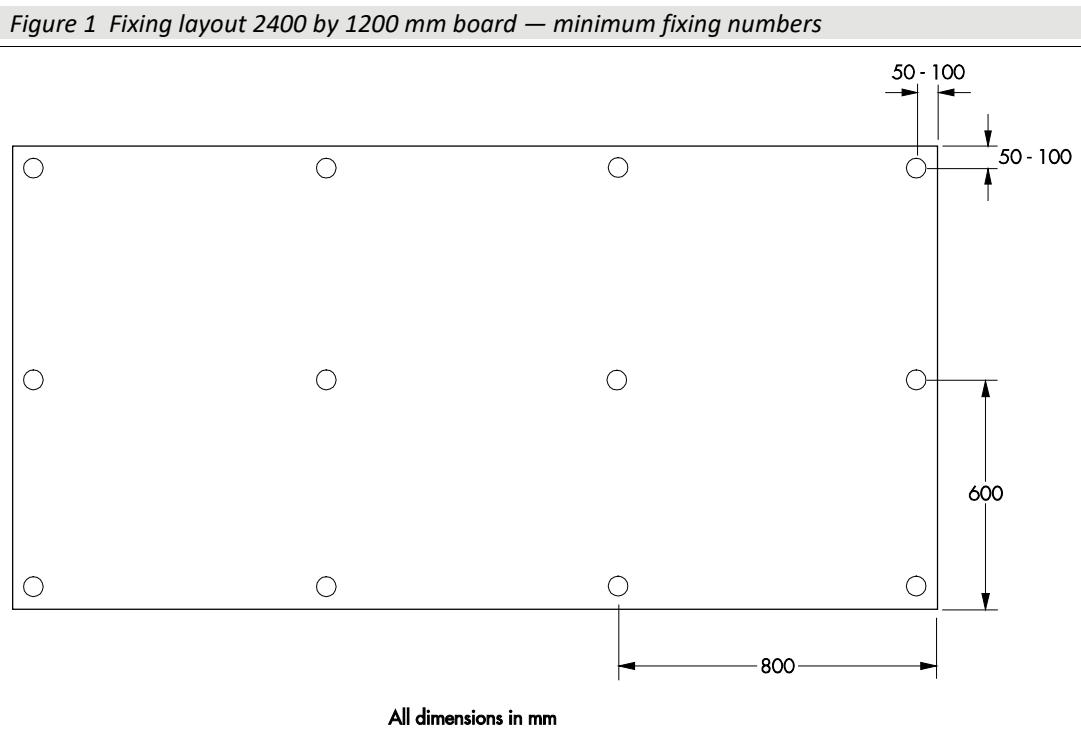
Management Systems Certification for production

The management system of the manufacturer has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015, BS EN ISO 14001 : 2015 and BS ISO 45001 : 2018 by BRE Global Ltd (Certificates 718 QMS, 718 EMS and 718 HS respectively).

Additional information on installation

Installation must be in accordance with the Certificate holder's instructions and this Certificate.

- A.1 The product is fixed directly to a concrete soffit.
- A.2 The product may be cut using a fine-toothed saw with a hardened blade.
- A.3 The board should be fixed to the soffit using a minimum of 12 approved fasteners, as shown in Figure 1.



- A.4 The distance between the fixings and the panel edge should not be less than 50 mm, or greater than 100 mm.

A.5 The fasteners must penetrate into the concrete soffit to the minimum distance as recommended by the fixing manufacturer for the installation in question.

A.6 Board joints should preferably be staggered.

Bibliography

- BRE Report BR 262 : 2002 *Thermal insulation: avoiding risks*
- BRE Report BR 443 : 2019 *Conventions for U-value calculations*
- BS 5250 : 2021 *Management of moisture in buildings — Code of practice*
- BS EN 1604 : 1996 *Thermal insulating products for building applications — Determination of dimensional stability under specified temperature and humidity conditions*
- BS EN 1607 : 1997 *Thermal insulating products for building applications — Determination of tensile strength perpendicular to faces*
- BS EN 1990 : 2002 *Eurocode — Basis of structural design*
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Conditions of Certificate

Conditions

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