

## Thermal Economics Ltd

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## Agrément Certificate

90/2436

Product Sheet 2 Issue 2

### ALREFLEX DRY LINING WALL INSULATION

### ALREFLEX 1L1 DRY LINING WALL INSULATION

This Agrément Certificate Product Sheet<sup>(1)</sup> relates to Alreflex 1L1 Dry Lining Wall Insulation, a single-layer polyethylene bubble sheet faced on one side with a coated aluminium foil. The product is for use as a thermal insulation and air and vapour control layer (AVCL) as a part of an insulating dry lining system for solid masonry walls, in new and existing domestic and non-domestic buildings.

(1) Hereinafter referred to as 'Certificate'.

#### The assessment includes

##### Product factors:

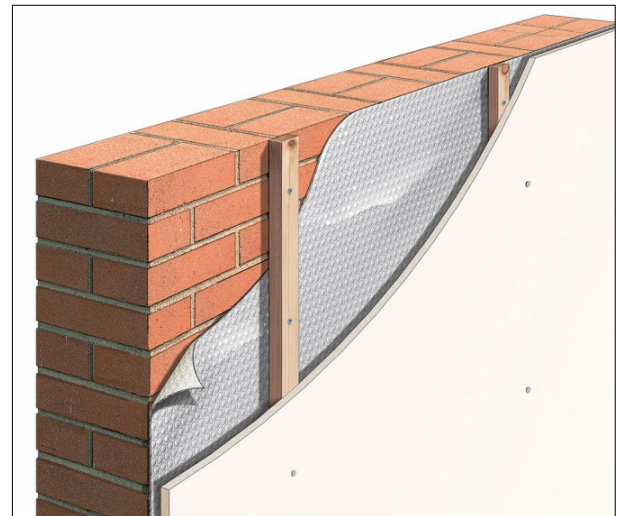
- compliance with Building Regulations
- compliance with additional regulatory or non-regulatory information where applicable
- evaluation against technical specifications
- assessment criteria and technical investigations
- uses and design considerations

##### 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



#### 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

The BBA has awarded this Certificate to the company named above for the product described herein. This product has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of Second issue: 24 October 2025

Originally certified on 17 June 1994

A handwritten signature in black ink, appearing to read 'Hardy Giesler'.

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.*

#### British Board of Agrément

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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 Alreflex 1L1 Dry Lining Wall Insulation, 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)

<b>Requirement:</b>	<b>B2(1)</b>	<b>Internal fire spread (linings)</b>
Comment:		The product can contribute to satisfying this Requirement. See section 2 of this Certificate.
<b>Requirement:</b>	<b>B3(4)</b>	<b>Internal fire spread (structure)</b>
Comment:		The product can contribute to satisfying this Requirement. See section 2 of this Certificate.
<b>Requirement:</b>	<b>B4(1)</b>	<b>External fire spread</b>
Comment:		The product is restricted by this Requirement. See section 2 of this Certificate.
<b>Requirement:</b>	<b>C2(c)</b>	<b>Resistance to moisture</b>
Comment:		The product can contribute to satisfying this Requirement. See section 3 of this Certificate.
<b>Requirement:</b>	<b>L1(a)(i)</b>	<b>Conservation of fuel and power</b>
Comment:		The product can contribute to satisfying this Requirement; however, compensating fabric measures will be required. See section 6 of this Certificate.
<b>Regulation:</b>	<b>7(1)</b>	<b>Materials and workmanship</b>
Comment:		The product is acceptable. See sections 8 and 9 of this Certificate.
<b>Regulation:</b>	<b>7(2)</b>	<b>Materials and workmanship</b>
Comment:		The product is restricted by this Regulation. See section 2 of this Certificate.
<b>Regulation:</b>	<b>25B</b>	<b>Nearly zero-energy requirements for new buildings</b>
<b>Regulation:</b>	<b>26</b>	<b>CO<sub>2</sub> emission rates for new buildings</b>
<b>Regulation:</b>	<b>26A</b>	<b>Fabric energy efficiency rates for new dwellings (applicable to England only)</b>
<b>Regulation:</b>	<b>26A</b>	<b>Primary energy rates for new buildings (applicable to Wales only)</b>
<b>Regulation:</b>	<b>26B</b>	<b>Fabric performance values for new dwellings (applicable to Wales only)</b>
<b>Regulation:</b>	<b>26C</b>	<b>Target primary energy rates for new buildings (applicable to England only)</b>
<b>Regulation:</b>	<b>26C</b>	<b>Energy efficiency rating (applicable to Wales only)</b>
Comment:		The product can contribute to satisfying these Regulations; however, compensating fabric/service measures will be required. See section 6 of this Certificate.



#### The Building (Scotland) Regulations 2004 (as amended)

<b>Regulation:</b>	<b>8(1)</b>	<b>Fitness and durability of materials and workmanship</b>
Comment:		The product is acceptable. See sections 8 and 9 of this Certificate.
<b>Regulation:</b>	<b>8(3)</b>	<b>Fitness and durability of materials and workmanship</b>
Comment:		The product is restricted by this Regulation. See section 2 of this Certificate.

<b>Regulation:</b>	<b>9</b>	<b>Building standards – construction</b>
Standard:	2.4	Cavities
Comment:		The product can contribute to satisfying this Standard, with reference to clauses 2.4.2 <sup>(1)(2)</sup> , 2.4.4 <sup>(1)</sup> and 2.4.6 <sup>(2)</sup> . See section 2 of this Certificate.
Standard:	2.5	Internal linings
Comment:		The product can contribute to satisfying this Standard, with reference to clause 2.5.1 <sup>(1)(2)</sup> . See section 2 of this Certificate.
Standard:	2.6	Spread to neighbouring buildings
Comment:		The product is restricted by this Standard, with reference to clauses 2.6.5 <sup>(1)</sup> and 2.6.6 <sup>(2)</sup> . See section 2 of this Certificate.
Standard:	3.15	Condensation
Comment:		The product can contribute to satisfying this Standard, with reference to clauses 3.15.1 <sup>(1)(2)</sup> , 3.15.4 <sup>(1)(2)</sup> and 3.15.5 <sup>(1)(2)</sup> . See section 3 of this Certificate.
Standard:	6.1(b)(c)	Energy demand
Comment:		The product can contribute to satisfying this Standard, with reference to clauses 6.1.1 <sup>(1)</sup> and 6.1.2 <sup>(2)</sup> ; however, compensating fabric/service measures will be required. See section 6 of this Certificate.
Standard:	6.2	Building insulation envelope
Comment:		The product can contribute to satisfying this Standard, with reference to clauses 6.2.1 <sup>(1)(2)</sup> , 6.2.3 <sup>(1)</sup> , 6.2.4 <sup>(2)</sup> , 6.2.6 <sup>(1)</sup> , 6.2.7 <sup>(1)(2)</sup> , 6.2.8 <sup>(1)(2)</sup> , 6.2.9 <sup>(1)(2)</sup> , 6.2.10 <sup>(1)(2)</sup> , 6.2.11 <sup>(1)(2)</sup> and 6.2.12 <sup>(1)</sup> ; however, compensating fabric measures will be required. See section 6 of this Certificate.
Standard:	7.1(a)(b)	Statement of sustainability
Comment:		The product can contribute to satisfying 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. See section 6 of this Certificate.
<b>Regulation:</b>	<b>12</b>	<b>Building standards – conversion</b>
Comment:		All comments given for the product under Regulation 9, Standards 1 to 6, also apply to this Regulation, with reference to clause 0.12.1 <sup>(1)(2)</sup> and Schedule 6 <sup>(1)(2)</sup> .
		(1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).



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

<b>Regulation:</b>	<b>23(1)(a)(i)</b>	<b>Fitness of materials and workmanship</b>
Comment:	<b>(iii)(b)(i)(ii)</b>	The product is acceptable. See sections 8 and 9 of this Certificate.
<b>Regulation:</b>	<b>23(2)</b>	<b>Fitness of materials and workmanship</b>
Comment:		The product is restricted by this Regulation. See section 2 of this Certificate.
<b>Regulation:</b>	<b>29</b>	<b>Condensation</b>
Comment:		The product can contribute to satisfying this Regulation. See section 3 of this Certificate.
<b>Regulation:</b>	<b>34</b>	<b>Internal fire spread – linings</b>
Comment:		This product can contribute to satisfying this Regulation. See section 2 of this Certificate.
<b>Regulation:</b>	<b>35(1)</b>	<b>Internal fire spread – structure</b>
Comment:		The product can contribute to satisfying this Regulation. See section 2 of this Certificate.

<b>Regulation:</b>	<b>35(4)</b>	<b>Internal fire spread – structure</b>
Comment:		The product can contribute to satisfying this Regulation. See section 2 of this Certificate.
<b>Regulation:</b>	<b>36(a)</b>	<b>External fire spread</b>
Comment:		The product is restricted by this Regulation. See section 2 of this Certificate.
<b>Regulation:</b>	<b>39(a)(i)</b>	<b>Conservation measures</b>
Comment:		The product can contribute to satisfying this Regulation; however, compensating fabric measures will be required. See section 6 of this Certificate.
<b>Regulation:</b>	<b>40(2)</b>	<b>Target carbon dioxide emission rate</b>
<b>Regulation:</b>	<b>43(1)(2)</b>	<b>Renovation of thermal elements</b>
<b>Regulation:</b>	<b>43B</b>	<b>Nearly zero-energy requirements for new buildings</b>
Comment:		The product can contribute to satisfying these Regulations; however, compensating fabric/service measures will be required. See section 6 of this Certificate.

## Additional Information

### NHBC Standards 2025

In the opinion of the BBA, Alreflex 1L1 Dry Lining Wall Insulation, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Chapters 6.1 *External masonry walls* and 9.2 *Wall and ceiling finishes*.

The opinion of the BBA does not amount to any endorsement or approval by NHBC and does not in any way guarantee that NHBC will approve such product / system as compliant with the NHBC Technical Requirements and Standards.

## Fulfilment of Requirements

The BBA has judged Alreflex 1L1 Dry Lining Wall Insulation to be satisfactory for use as described in this Certificate. The product has been assessed for use as a thermal insulation and AVCL as a part of an insulating dry lining system for solid masonry walls, in new and existing domestic and non-domestic buildings.

## ASSESSMENT

### Product description and intended use

The Certificate holder provided the following description for the product under assessment. Alreflex 1L1 Dry Lining Wall Insulation consists of a single layer of polyethylene bubble sheet manufactured with a coated aluminium foil facing on one side.

The product has the nominal characteristics given in Table 1.

*Table 1 Nominal characteristics*

Characteristic (unit)	Value
Length (m)	100
Width (m)	1.05 or 1.2
Thickness (mm)	3.5 ± 0.5
Weight (g·m <sup>-2</sup> )	≥ 125
Bubble film layers	1 bubble layer, 1 foil

## Ancillary Items

The Certificate holder recommends the following ancillary items for use with the product, but these materials have not been assessed by the BBA and are outside the scope of this Certificate:

- Thermal Economics Alu Tape
- preservative-treated timber battens
- galvanized metal furring channels
- nails, screws and plugs
- plasterboard to BS EN 520 : 2004
- double-sided adhesive tape
- gypsum bonding compound.

## Applications

The product is intended for use as part of an insulating dry lining system onto timber battens or metal furrings fixed to a solid masonry wall (where masonry includes clay and calcium silicate bricks, concrete blocks and natural and reconstituted stone blocks). Additional insulation will be required to meet the target U values of the national Building Regulations.

## Product assessment – key factors

The product was 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 characteristic.

#### 1.1 Mechanical properties

1.1.1 The product was tested for mechanical properties and the results are given in Table 2.

*Table 2 Mechanical properties*

Product assessed	Assessment method	Requirement	Result
Alreflex 1L1 Dry Lining Wall Insulation	Resistance to tearing (nail shank) to BS EN 12310-1 : 2000 Control		
	Longitudinal direction	Value achieved	70 N
	Transverse direction		65 N
	Heat aged at 70°C and 90% RH for 28 days		
	Longitudinal direction		80 N
	Transverse direction		75 N
Alreflex 1L1 Dry Lining Wall Insulation (taped product)	Shear resistance of joints to BS EN 12317-2 : 2010	Value achieved	
	Side joint		42 N·(50 mm) <sup>-1</sup>
	End joint		57 N·(50 mm) <sup>-1</sup>

1.1.2 On the basis of data assessed, the product has adequate mechanical properties.

### 2 Safety in case of fire

Data were assessed for the following characteristics.

#### 2.1 Reaction to fire

2.1.1 The Certificate holder has not declared a reaction to fire classification to BS EN 13501-1 : 2018 for the product.

2.1.2 On the basis of data assessed, the product will be restricted in use under the documents supporting the national Building Regulations.

2.1.3 In England, the product must not be used on external walls of residential buildings with a storey 11 m or more in height or on other buildings with a floor at least 18 m above ground level.

2.1.4 In Wales and Northern Ireland, the product must not be used on external walls of buildings with a storey 18 m or more in height.

2.1.5 In Scotland, the product must not be used on external walls of buildings that have a storey at least 11 m above ground level or within 1 m of a relevant boundary.

2.1.6 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 wall construction.

## 2.2 Resistance to fire

Where the product is incorporated in a wall 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 product was assessed for water vapour resistance and the result is given in Table 3.

*Table 3 Water vapour resistance*

Product assessed	Assessment method	Requirement	Result
Alreflex 1L1 Dry Lining Wall Insulation	BS EN ISO 10456 : 2007	Declared value	125 MN·s·g <sup>-1</sup>

3.1.2 For the purposes of assessing the risk of condensation, the water vapour resistance value may be taken as stated in Table 3.

### 3.2 Condensation

3.2.1 The BBA has assessed the product for the risk of interstitial condensation, and the following must be implemented.

3.2.2 Where calculations to BS 5250 : 2021 indicate a risk of persistent interstitial condensation, a site-specific dynamic analysis to BS EN 15026 : 2023 must be carried out.

3.2.3 All joints between the product must be sealed in accordance with the Certificate holder's instructions (see Annex A of this Certificate), to ensure adequate resistance to water vapour transmission.

## 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 performance

The product components were tested/assessed for thermal performance and the results are given in Table 4.

*Table 4 Thermal performance*

Product assessed	Assessment method	Requirement	Result
Alreflex 1L1 Dry Lining Wall Insulation <sup>(1)</sup> (Bubble sheet core)	Thermal resistance to BS EN ISO 22097 : 2023	Declared value	0.10 m <sup>2</sup> ·K·W <sup>-1</sup>
Alreflex 1L1 Dry Lining Wall Insulation (Aluminium foil facing)	Aged emissivity to BS EN ISO 22097 : 2023	Declared value	0.05
Air cavity (≥ 20 mm thick) adjacent to the product	Thermal resistance to BS EN ISO 6946 : 2017	Calculated value	0.67 m <sup>2</sup> ·K·W <sup>-1</sup>

(1) Uncompressed

### 6.2 Conservation of fuel and power

6.2.1 The U value of a completed wall construction will depend on the thickness and conductivity of the additional insulation, fixings used, the thermal properties of the substrate wall, bridging and any finishes. Additional insulation will be required to meet the target U values of the national Building Regulations.

6.2.2 The product can contribute towards a 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 and/or 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 the product were assessed.

8.2 Specific test data were assessed as given in Table 5.

*Table 5 Durability*

Product assessed	Assessment method	Requirement	Result
Alreflex 1L1 Dry Lining Wall Insulation	Resistance to tearing (nail shank) to BS EN 12310-1 : 2000 (70°C and 90% RH for 28 days) Longitudinal direction Transverse direction	Aged value not significantly less than the control value	Pass

### 8.3 Service life

Under normal service conditions, the product will have a life at least equivalent to the structure in which it is incorporated, provided it is 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 Walls must be designed and constructed in accordance with the relevant recommendations of:

- BS 5250 : 2021
- BS 8000-3 : 2020
- BS EN 351-1 : 2023
- BS EN 1996-1-1 : 2005 and its UK National Annex
- BS EN 1996-1-2 : 2005 and its UK National Annex
- BS EN 1996-2 : 2006 and its UK National Annex
- BS EN 1996-3 : 2006 and its UK National Annex.

9.1.3 Since insulating dry linings are not intended to resist rain penetration or rising damp, walls to be insulated with the product must already be rain resistant and show no signs of water ingress or rising damp.

9.1.4 Particularly with older exposed walls, designers must consider the extent to which the wall and components in the wall can tolerate the lower temperatures and prolonged drying time resulting from the application of the insulating dry lining. Care must also be taken to assess the risks of condensation forming on thermal bridges that cannot be effectively insulated.

9.1.5 All services which penetrate the product, eg light switches and power outlets, must be kept to a minimum to limit damage to vapour checks. All perimeters of the product, around service penetrations, openings, junctions and around the perimeter of suspended timber floors must be sealed with a suitable sealant. The Certificate holder can advise on suitable materials, but such advice and products are outside the scope of this Certificate.

9.1.6 It is essential that proper care and attention is given to maintaining the integrity/continuity of the AVCL. The site must be surveyed, and provisions made for existing ventilation. There must be no gaps at the perimeter (such as floors or ceilings) or junctions (such as internal corners), or around openings or service penetrations. Existing gaps must be sealed before lining commences.

9.1.7 The detailed guidance given in the documents supporting the national Building Regulations for the provisions that are applicable when the product is installed in close proximity to certain flue pipes and/or heat producing appliances must be followed.

9.1.8 With installations that form a void of 20 mm or more (ie timber batten or metal liner stud system and drywall adhesive dabs), services can be incorporated behind the product, making the chasing of the wall unnecessary. Suitable isolation methods, such as a conduit or capping, must be used to ensure cables do not come into contact with the insulation.

9.1.9 Bearing surfaces for timber battens and metal furrings must comply with BS 8212 : 1995. The depth of timber battens or metal furrings will determine the air space achieved on either side of the product. The thickness of the product must also be considered as part of the design specification to achieve the required air space (see Table 6 of this Certificate).

9.1.10 The installation of an insulating dry lining system requires careful detailing around doors and windows to achieve a satisfactory surface for finishing. In addition, every attempt must be made to minimise the risk of thermal bridging at reveals and where heavy separating walls are attached to the external wall. All work must be designed to accommodate the thickness of the dry lining, particularly at reveals, heads and sills and in relation to ceiling height. Where the dimensions of fixtures are critical (eg bathrooms), these must be checked before installation.

9.1.11 The use of this product does not in itself promote infestation. The creation of voids may provide habitation for insects or rodents in areas already infested. Care must be taken to ensure that, wherever possible, all voids are sealed as any infestation may be difficult to eradicate. There is no food value in the materials used.

9.1.12 Any object fixed to the wall, other than lightweight items, eg framed pictures, must be fixed through the lining board into the wall behind, using proprietary fixings. The Certificate holder can advise on suitable materials, but such advice and products are outside the scope of this Certificate.

9.1.13 Calculations of the thermal transmittance (U value) of specific wall constructions must be carried out in accordance with BS EN ISO 6946 : 2017 and BRE Report BR 443 : 2019, using the core thermal resistance and the emissivity values from Tables 4 and 5 of this Certificate.

9.1.14 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 given in the documents supporting the national Building Regulations must be followed.

#### *Interstitial condensation*

9.1.15 To limit the risk of interstitial condensation, walls must be designed and constructed in accordance with BS 5250 : 2021.

#### *Surface condensation*

9.1.16 In England and Wales, walls 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 other elements are designed in accordance with section 9.1.14 of this Certificate.

9.1.17 For buildings in Scotland, wall constructions will be acceptable where the thermal transmittance (U value) of the wall does not exceed  $1.2 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$  at any point, and openings and junctions with other elements comply with BS 5250 : 2021, BRE Report BR 262 : 2002 and section 9.1.14 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, the Certificate holder's instructions and the relevant sections of BS 8212 : 1995. A summary of instructions and guidance is provided in Annex A of this Certificate.

9.2.3 A qualified plumber is required to make alterations to heating systems. A qualified electrician must be used to make good the electrical wirings and services.

9.2.4 A detailed survey of the property must be carried out before work starts, which must include:

- suitability of substrate
- detailing around windows and doors
- position and number of electrical sockets and switches
- wall fittings and fixtures — including coving and skirting
- areas where flexible sealants must be used
- ventilation plates.

9.2.5 If present, mould or fungal growth must be treated prior to the application of the product.

9.2.6 Before starting to fit the product, the position of all main service cable and pipe runs must be clearly marked on the walls to avoid damage. All plaster coving, skirting board and laminate floor angle bead must be removed.

9.2.7 All insulated dry lining installations require careful planning and setting out.

9.2.8 Additional consideration must also be given for the fixing of such features as cupboards and radiators.

### 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 product must be carried out by a competent general builder, or a contractor experienced with this type of product.

### 9.4 Maintenance and repair

Under conditions of normal use, maintenance is not required.

## **10 Manufacture**

10.1 The production processes for the product 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 product is delivered to site in packaging bearing the product name and characteristics, production date, batch number and the BBA logo including 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 product must be stored in clean and dry conditions, off the ground and under cover from precipitation.

11.2.2 Damaged products must be discarded.

Supporting information in this Annex is relevant to the product 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.

### Management Systems Certification for production

The management system of the manufacturer has been assessed and registered as meeting the requirements of ISO 9001 : 2015 by BSI (Certificate FM 82602).

### Additional information on installation

#### Procedure

#### **Timber batten method**

A.1 Preservative-treated timber battens, with a nominal cross-section of 19 mm by 38 mm, are fixed to the wall at vertical centres with suitable fixings, eg wire-cut nails, screws, plugs (see Figures 1 to 5). Centres must be not more than 400 and 600 mm for plasterboard thicknesses of 9.5 and 12.5 mm or greater, respectively. Adequate time must be allowed for solvent-based preservatives to be fixed and for the solvent to evaporate.

A.2 The product is butt-jointed on the battens with the foil facing the wall, then stapled or fixed with clout nails to the battens and pulled tight to maintain the cavity between it and the wall. The joints are sealed with Thermal Economics Alu Tape.

A.3 The plasterboard is fixed over the Alreflex 1L1 and onto the battens in the usual manner.

#### **Metal furrings method**

A.4 Galvanized metal furrings are fixed to the wall at vertical centres using dabs of gypsum bonding compound (see Figure 6). The inner face of the metal furring must be a minimum of 20 mm from the wall face and centres must be no more than 400 and 600 mm for plasterboard thicknesses of 9.5 and 12.5 mm or greater, respectively.

A.5 100 mm lengths (approximately) of double-sided adhesive tape are applied to the metal furrings at 200 mm intervals. The release paper should be temporarily left on the tape to allow for a trial fit and to enable the product to be cut to the required size.

A.6 The release papers are then removed from the tape, and the pre-cut Alreflex 1L1 is carefully adhered and butt-jointed over the metal furrings. The product must be applied with the foil facing the wall and be sufficiently taut to maintain the cavity between it and the wall. The plasterboard is fixed over the product and secured to the metal furrings using self-tapping screws.

A.7 Finishes, eg skirting or coving, may then be applied in the usual manner.

Figure 1 General arrangement

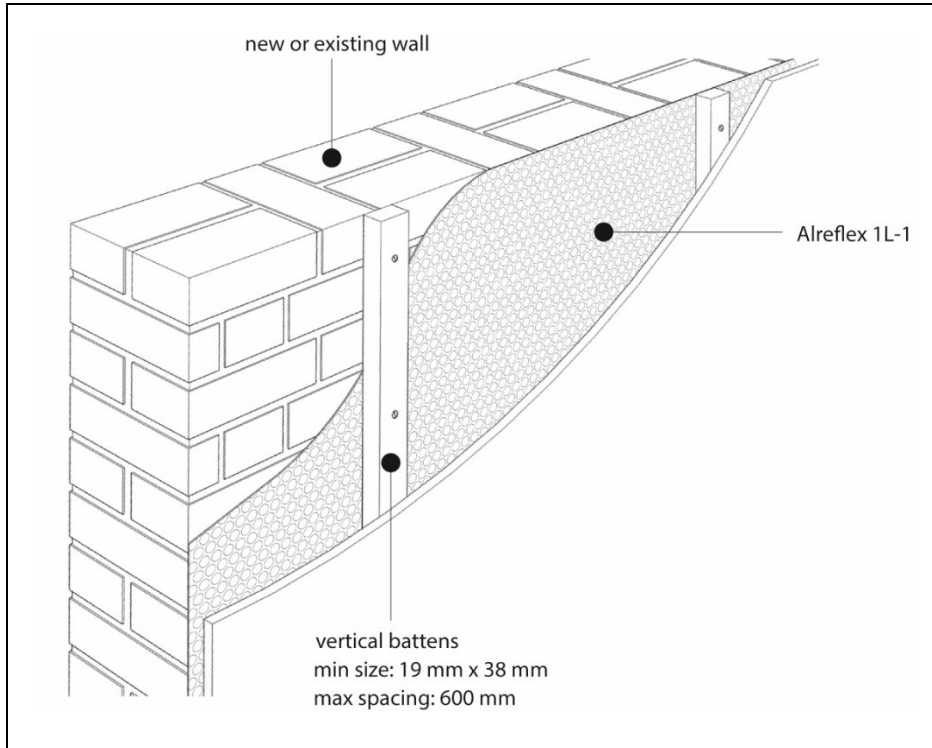


Figure 2 Typical door or window reveal detail

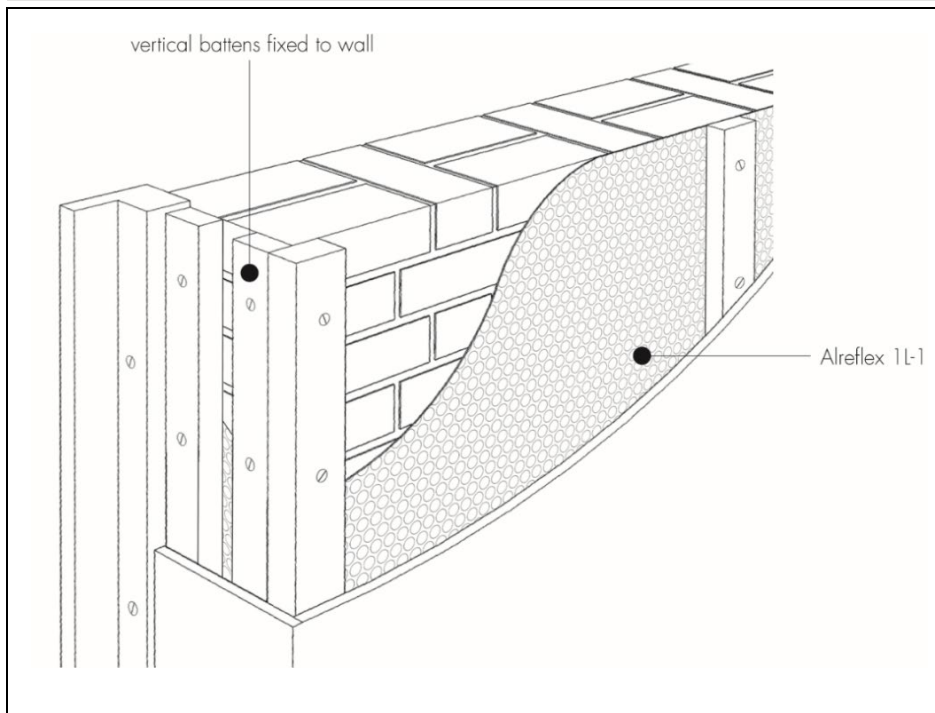


Figure 3 Typical external corner detail

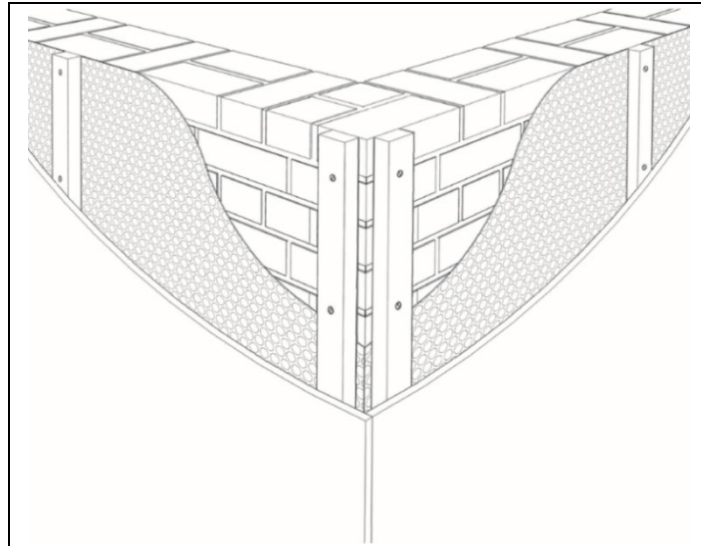


Figure 4 Typical internal corner detail

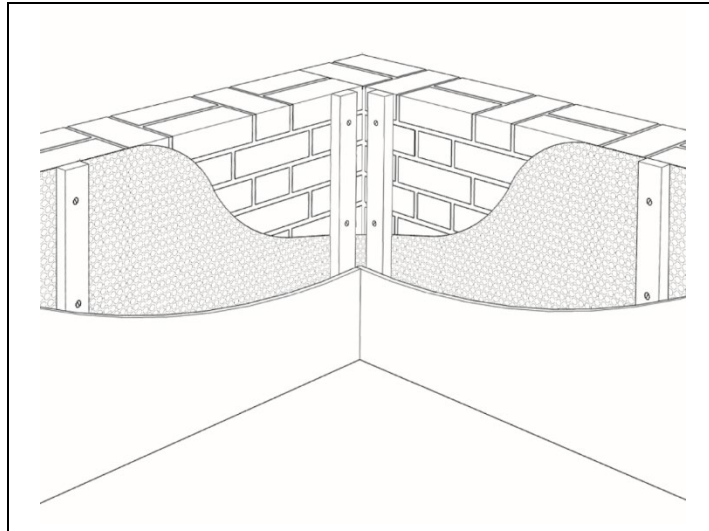


Figure 5 Detail of butt joint

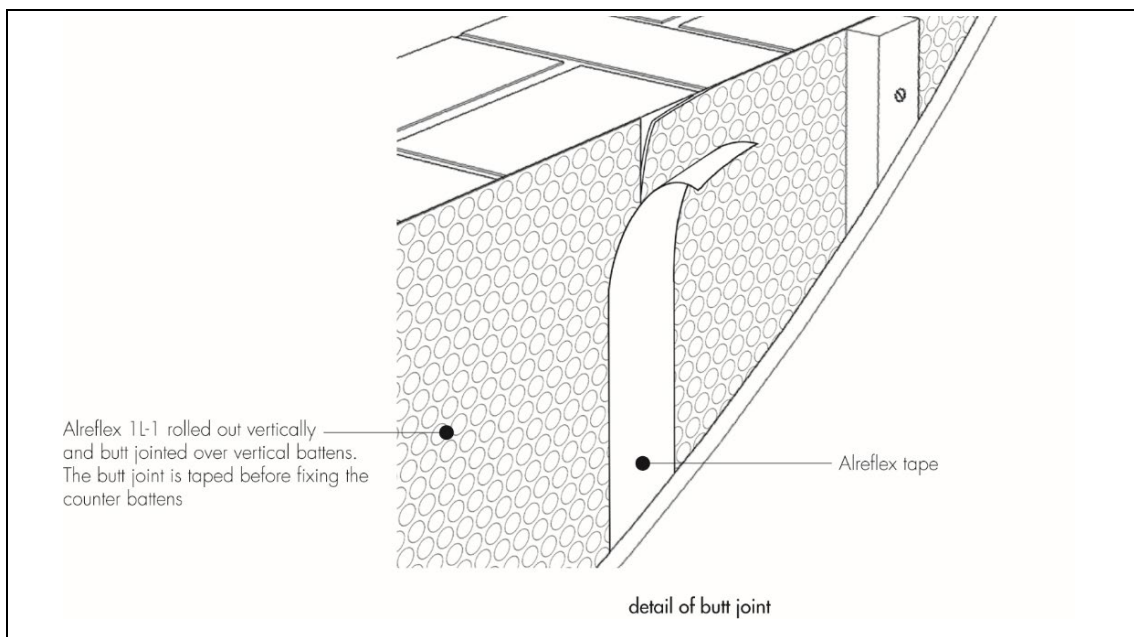
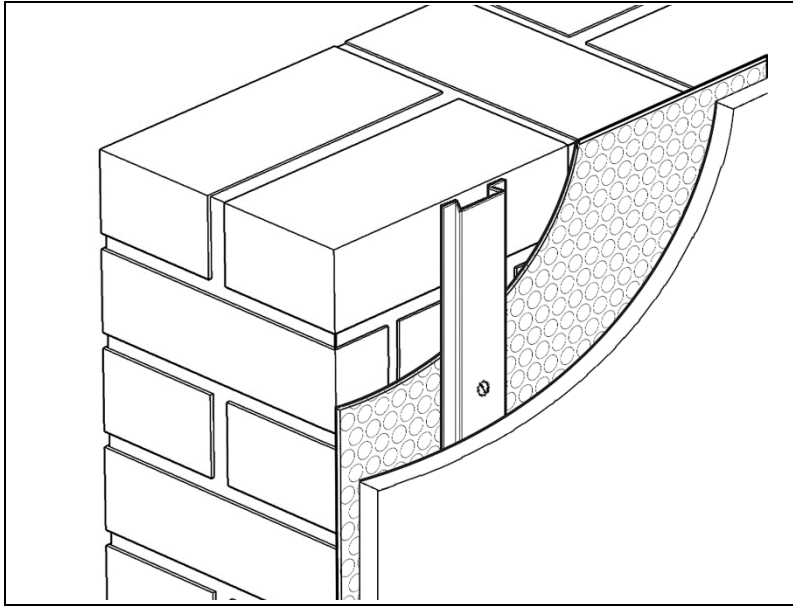


Figure 6 Metal furrings method



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