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Agrément Certificate

21/5978

Product Sheet 1 Issue 1

SIDERISE CAVITY TRAYS

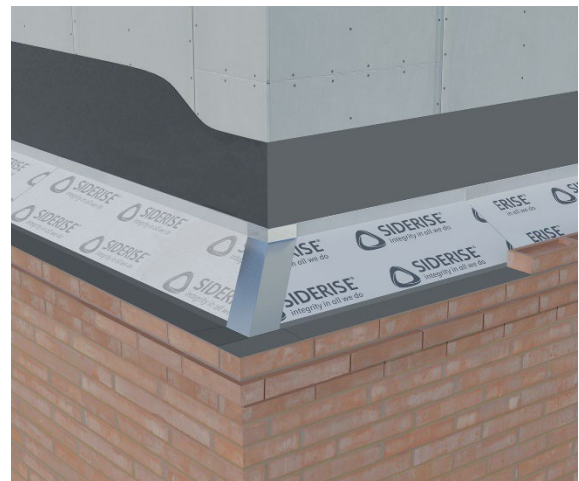
SIDERISE CT

This Agrément Certificate Product Sheet⁽¹⁾ relates to Siderise CT, an aluminium cavity tray with an integral mineral wool insulation, used in the external walls of masonry or steel frame constructions, with a brickwork outer leaf.

(1) Hereinafter referred to as 'Certificate'.

CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production†
- formal three-yearly review.†



KEY FACTORS ASSESSED

Behaviour in relation to fire — the product may be classified A2-s1, d0 in accordance with BS EN 13501-1 : 2018 (see section 6).

Behaviour under load — the product will not adversely affect the ability of the wall to sustain and transmit compressive loads (see section 7).

Resistance to passage of water — the product will provide an effective barrier against liquid water above the ground dpc level (see section 8).

Use with cavity wall insulation — the product is compatible with A1 fire-rated materials currently used as cavity wall insulation (see section 9).

Durability — under normal service conditions, the product will remain effective for the lifetime of the building in which they are installed (see section 11).

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 First issue: 24 January 2022

Certificate amended on 19 May 2023 to update sections 14.8 and 15.

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

Hardy Giesler
Chief Executive Officer

The BBA is a UKAS accredited Inspection Body (No.4345).

This certificate has been amended on 19 May 2023 as part of a transition of The BBA Agrément Certificate scheme delivered under the BBA's ISO/IEC 17020 accreditation. Sections marked with the symbol † are not issued under accreditation.

Readers MUST check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly. Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon

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Page 1 of 11

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Regulations

In the opinion of the BBA, Siderise CT, 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 presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):



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

Requirement:	A1	Loading
Comment:		The product can contribute to satisfying this Requirement when properly installed. The presence of a damp-proof course (DPC), however, can reduce the shear and tensile strength of a wall at that location. See section 7 of this Certificate.
Requirement:	B4(1)	External Fire Spread
Comment:		The product is unrestricted under this Requirement. See section 6 of this Certificate.
Requirement:	C2(b)	Resistance to moisture
Comment:		The product can contribute to satisfying this Requirement. See section 8 of this Certificate.
Regulation:	7(1)	Materials and workmanship
Comment:		The product is acceptable. See section 11 and the <i>Installation</i> part of this Certificate.
Regulation	7(2)	Materials and workmanship
Comment		The product is unrestricted by this Regulation. See section 6 of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)	Durability, workmanship and fitness of materials
Comment:		The use of the product can contribute to a construction satisfying this Regulation. See section 11 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards applicable to construction
Standard:	1.1(a)(b)	Structure
Comment:		The product can contribute to a construction satisfying this Standard with reference to clause 1.1.1 ⁽¹⁾⁽²⁾ . The presence of a dpc, however, can reduce the shear and tensile strength of a wall at that location. See section 7 of this Certificate.
Standard:	2.6	Spread on external walls
Comment:		The product is unrestricted under this Standard with reference to clauses 2.6.5 ⁽¹⁾ and 2.6.6 ⁽²⁾ . See section 6 of this Certificate.
Standard:	3.1	Precipitation
Comment:		The product can contribute to a construction satisfying this Standard, with reference to clauses 3.10.1 and 3.10.4. See section 8 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The product can contribute to meeting the relevant requirements of Regulation 9, Standards 1 to 6 and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard.
Regulation:	12	Building standards applicable to conversions
Comment:		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:	23(a)(i)	Fitness of materials and workmanship
Comment:	(iii)(b)(i)	The product is acceptable. See section 11 and the <i>Installation</i> part of this Certificate.
Regulation:	28(b)	Resistance to moisture
Comment:		The product can contribute to satisfying this Regulation. See section 8 of this Certificate.
Regulation:	30	Stability
Comment:		The product can contribute to satisfying this Regulation. The presence of a dpc, however, can reduce the shear and tensile strength of a wall at that location. See section 7 of this Certificate.
Regulation:	36(a)	Fire Safety
Comment:		The product is unrestricted under this Requirement. See section 6 of this 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.

See section: *3 Delivery and site handling* of this Certificate.

Additional Information

NHBC Standards 2022

In the opinion of the BBA, Siderise CT, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Chapter 6.1 *External masonry walls* and Chapter 6.10 *Light steel framed walls and floors*.

Technical Specification

1 Description

1.1 Siderise CT cavity tray is manufactured from 0.08mm thick aluminium foil wrapped around a mineral wool insulation with an integrated damp-proof membrane (DPM) bonded to the horizontal mortar flap. The tray has two integrated strips of double sided tape on the left edge and top flap for installation and sealing to adjacent trays and is available in lengths of 1000 mm.

Figure 1 Siderise CT cavity tray



1.2 Ancillary items supplied for use with the trays are:

- Siderise Stop Ends – flexible membranes bonded to the open end of the CT by Siderise CT jointing tape, and Siderise DPM Seal tape
- Siderise CT Jointing Tape – A 120 mm single sided aluminium jointing tape for sealing two mitre cut corner sections.
- Siderise DPM Tape – A 120 mm single sided DPM type tape for oversealing CT jointing tape within the mortar bed.

1.3 Ancillary items used with the products, but outside the scope of the Certificate, are weeps, for channelling water from the tray to the outside of the brickwork.

2 Manufacture

2.1 The product is formed by cutting mineral wool insulation to the desired shape, then wrapping with a 0.08 mm aluminium foil and held in place by two spiral screws on the underside of the product.

2.2 The aluminium foil is extended by 50 mm at the top and bonded to form a 50 mm supporting flap, and extended by 105 mm at the bottom, bonded, and wrapped in DPM tape, to form an integrated damp proof course (DPC).

2.3 As part of the assessment and ongoing surveillance of product quality, the BBA has:

- agreed with the manufacturer the quality control procedures and product testing to be undertaken
- assessed and agreed the quality control operated over batches of incoming materials
- monitored the production process and verified that it is in accordance with the documented process
- evaluated the process for management of nonconformities
- checked that equipment has been properly tested and calibrated
- undertaken to carry out 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.

2.4 The management system of Siderise Insulation Limited have been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by BM Trada (Certificate No. 11377).

3 Delivery and site handling

3.1 The product is delivered to site in cardboard boxes and shrink-wrapped on pallets. Address labels and delivery notes are attached along with customer drawings, ancillary items and installation instructions.

3.2 To prevent damage or surface contamination, the pallets should be unloaded by forklift truck and the products should be stored in a secure place in the original packaging until required for use.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Siderise CT.

Design Considerations

4 General

4.1 Siderise CT, and the associated ancillary items, when specified and installed in accordance with this Certificate and generally with the specifications in PD 6697 : 2019, BS EN 1996-1-2 : 2005, BS EN 1996-2 : 2006, BS EN 1996-3 : 2006 and BS 8215 : 1991, are satisfactory for use in external cavity walls with a brick outer leaf and either a steel framing system (SFS) or a concrete/blockwork inner leaf.

4.2 The external leaf of the cavity walls should be built from standard brickwork with a minimum thickness of 102.5 mm.

5 Practicability of installation

The product is designed to be installed by a competent general builder or bricklayer experienced with these types of products.

6 Behaviour in relation to fire



6.1 Siderise CT in construction applications used over any substrate with a density equal to or greater than 525kg/m^3 , having a minimum thickness of 12 mm and a fire performance of A2-s1, d0 or better, is classified A2-s1, d0 in accordance with BS EN 13501-1 : 2018⁽¹⁾. The use of the product under these specific circumstances is therefore unrestricted under the documents supporting the national Building Regulations.

(1) Classification report WF 432839 issue 1 issued by Warringtonfire. A copy of the report is available from the Certificate holder.

6.2 This performance may not be achieved on other substrates. The classification of the product under such circumstances, and its permissible areas of application, should be determined in accordance with the documents supporting the national Building Regulations.

7 Behaviour under load



The product will not adversely affect the ability of a wall to sustain and transmit compressive loads. However, the presence of a dpc can reduce the shear and tensile (and therefore bending) strengths of a wall. Test walls⁽¹⁾ incorporating the products and tested to BS EN 1052-4 : 2000 gave a Characteristic Shear Strength of 0.16 Nmm^{-2} , and when tested to DD86-1 : 1983 gave a Characteristic Internal Angle of Friction of 21.46° . The effect of wind and other horizontal or upward forces should be considered at the design stage.

(1) The test walls in these tests used Sunset Red bricks with a tabulated compressive strength of 63 Nmm^{-2} and a 1:1:6 mortar with a compressive strength of 3.8 Nmm^{-2} .

8 Resistance to passage of water



The Siderise CT and associated ancillaries when sealed together, provide a continuous barrier against liquid water. Water is typically ejected through weepholes or evaporated from the outer skin.

9 Use with cavity wall insulation

Aluminium foil has no effect on, and is unaffected by, materials currently used as A1 fire-rated cavity wall insulants.

10 Maintenance

As the product is confined within the wall and wall cavity, and have suitable durability (see section 11), maintenance is not required. However, any damage occurring before enclosure must be repaired (see section 15).

11 Durability



Under normal service conditions, the tray will remain effective for the life of the building in which they are installed.

12 Reuse and recyclability

The product includes aluminium and mineral wool insulation, which can be recycled.

Installation

13 General

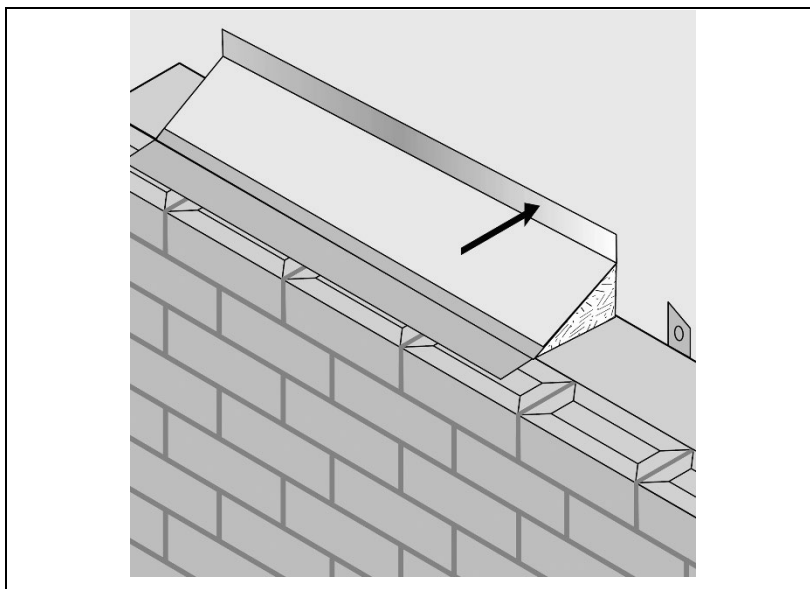
13.1 Siderise CT must be installed in accordance with this Certificate, the Certificate holder's instructions, and generally in accordance with PD 6697 : 2019, BS EN 1996-1-1 : 2005, BS EN 1996-2 : 2005, BS EN 1996-3 : 2006 and BS 8215 : 1991.

13.2 The product may be installed at a minimum temperature of 5°C in any weather that permits bricklaying. All relevant surfaces must be clean and dry prior to installing the cavity tray units.

14 Procedure

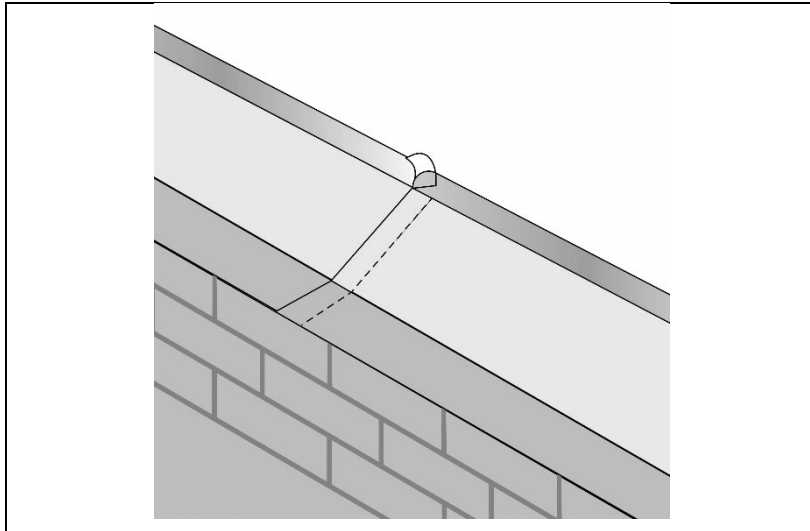
14.1 The product is placed on the exposed brickwork, and against the inner skin in 1000 mm sections to form straight sections of the install (see Figure 2). Products are butted up against each other.

Figure 2 Tray is placed in position



14.2 The release paper is removed from the top flap, and the self-adhesive flap is firmly pressed on to the inner skin to form a product supporting bond. The release paper is removed from the side flap, and the self-adhesive flap is firmly pressed onto the adjacent straight section (see Figure 3).

Figure 3 Trays are jointed together with adhesive flap



14.3 For internal or external corner sections, two straight sections are mitre cut to the correct internal or external angle, and placed on the exposed brickwork, and against the inner skin of the corner wall feature, and bonded to the inner skin as per section 14.2. The joint between the two mitred edges (see Figure 4) is then over sealed using Siderise CT Jointing Tape from the inner skin (see Figure 5), to the edge of the integrated DPC element of the product. Siderise CT Jointing Tape on the integrated DPC is then over sealed with Siderise DPM Tape (see Figure 6).

Figure 4 Trays are mitre cut for jointed corners

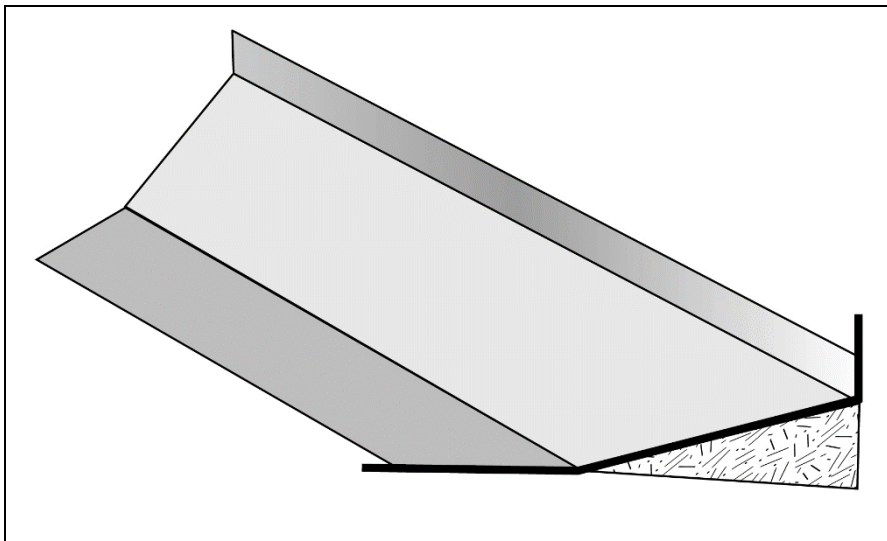


Figure 5 CT Jointing Tape applied to seal mitred joints

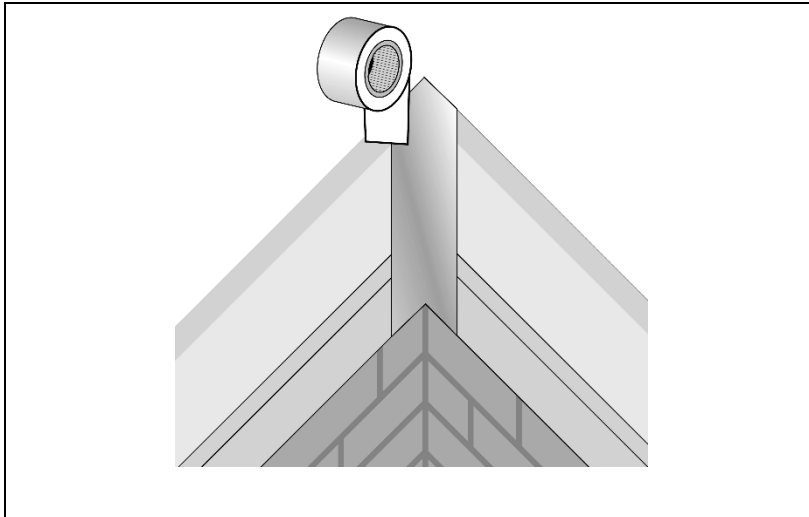
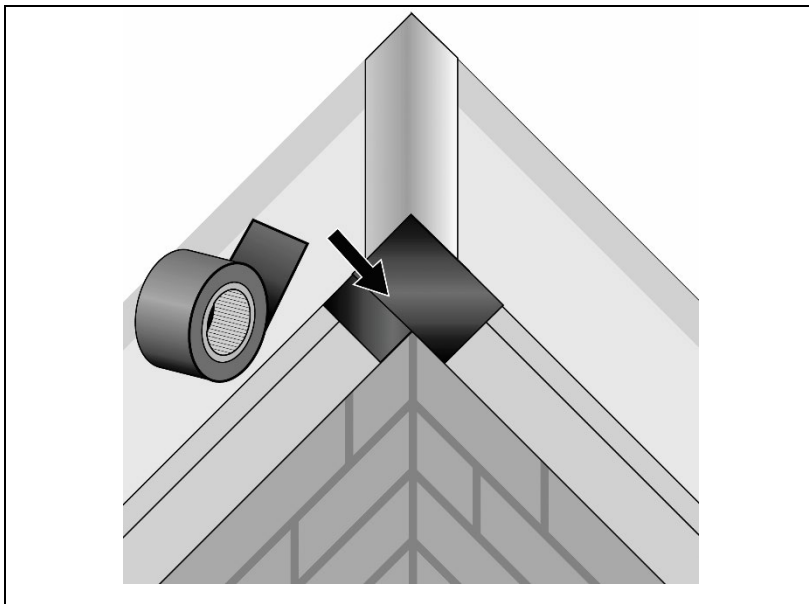
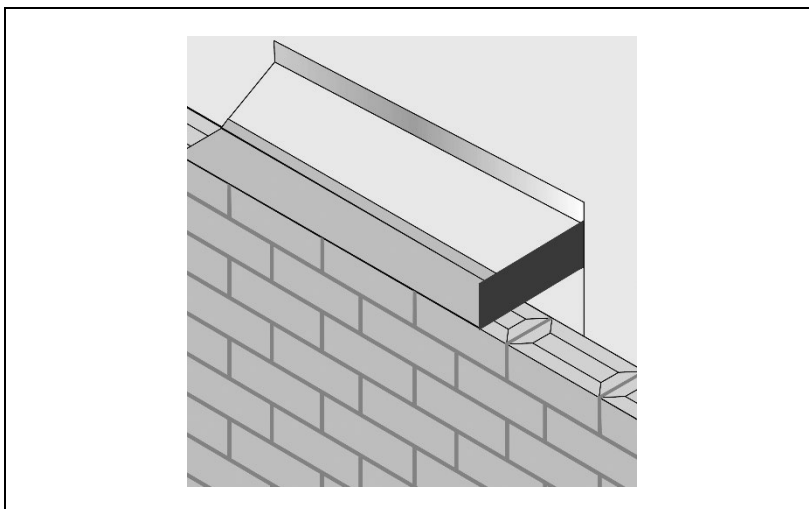


Figure 6 Siderise DPM Tape applied over CT jointing tape at lower flap



14.4 At wall terminations, Siderise Stop Ends are used at the open end of the CT with Siderise CT jointing tape, and Siderise DPM Seal tape (see Figure 7).

Figure 7 Siderise Stop Ends



14.5 A bed of mortar is applied to the outer skin of the wall, under the integrated DPC of the product, and the upper face of the integrated DPC is cleaned to remove sharp objects to prevent damage to it.

14.6 Steps 14.1 to 14.5 are repeated until the installation of the trays is completed.

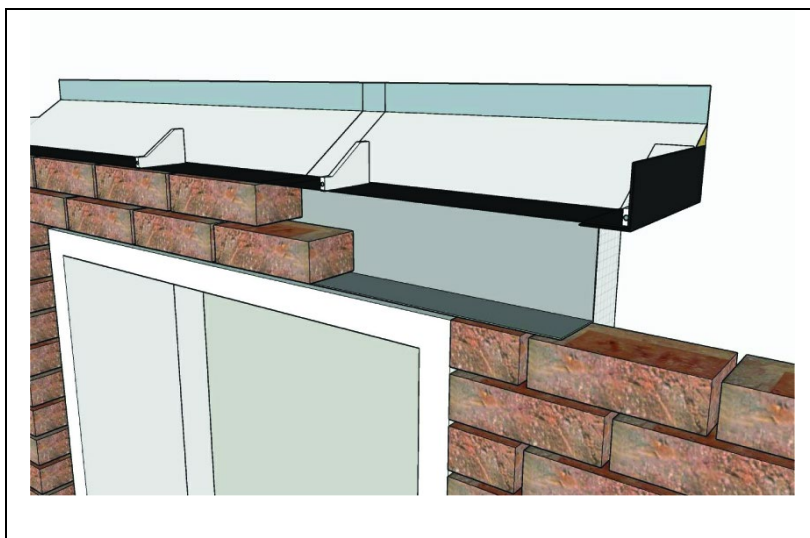
14.7 A fresh bed of mortar is then applied to the trays and a course of masonry units is bedded onto it. Non-combustible weeps are installed at a maximum spacing of 675 mm centres, unless the trays are used with lintels, in which case they are installed at maximum spacing of 450 mm (with the proviso of a minimum number of two per lintel).

14.8 Mortar lumps must be prevented from falling onto the tray during construction. A common approach is to lay a hessian mesh over the trays while bricks are laid, which is then pulled out through a single omitted brick once the row above is finished. The lower trays must be regularly inspected throughout installation as the row above is completed, to ensure that all such lumps have been removed.

14.9 The product is compatible with both 'C' and 'L' type lintels (see Figure 8) from 0.9m to 4.9m width. A minimum lintel projection beyond the vertical dpc of 25 mm should be observed and stopends should be placed to coincide with perpendicular joints. Further guidance can be found in the NHBC Standards, Chapter 6.1 (6.1.17) and Technical Guidance Note 6.1/29 Forming stop ends to cavity trays.

14.10 For installation with 'L' type lintels where the tray is installed 1-2 courses of brickwork above the lintel, additional weeps should be placed on the lintel lower edge at maximum spacing of 450 mm (with the proviso of a minimum number of two per lintel).

Figure 8 Typical installation above 'L' type lintel



15 Repair

Small areas of damaged cavity trays should be repaired with a strip of Siderise CT Jointing Tape prior to the installation of brick, block or masonry courses above the tray. Any punctures in excess of 40 mm will need to be replaced with a new tray.

Technical Investigations

16 Tests

Tests were carried out and the results assessed to determine:

- Characteristic shear strength
- Characteristic flexural bond strength
- Overlap shear strength of cavity trays joints after accelerated ageing
- Leakage test carried out on a sample installation.

17 Investigations

17.1 The manufacturing process was evaluated, including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

17.2 A visit was carried out to a site-in-progress to assess the practicability of installation.

Bibliography

PD 6697 : 2019 *Recommendations for the design of masonry structures to BS EN 1996-1-1 and BS EN 1996-2*

BS EN 1996-1-1 : 2005 + A1 : 2012 *Eurocode 6 – Design of masonry structures – General rules for reinforced and unreinforced masonry structures*

BS EN 1996-1-2 : 2005 *Eurocode 6 – Design of masonry structures – General rules – Structural fire design*

BS EN 1996-2 : 2006 *Design of masonry structures – Design considerations, selection of materials and execution of masonry*

BS EN 1996-3 : 2006 *Eurocode 6 – Design of masonry structures – Simplified circulation methods for unreinforced masonry structures*

BS 8215 : 1991 *Code of practice for design and installation of damp-proof courses in masonry construction*

BS EN ISO 9001 : 2015 *Quality management systems – Requirements*

BS EN 1052-4 : 2000 *Methods of test for masonry – Determination of shear strength including damp proof course*

DD86-1 : 1983 *Damp-proof courses – Methods of test for flexural bond strength and short term shear strength*

18 Conditions

1 This Certificate:

relates only to the product that is named and described on the front page
is issued only to the company, firm, organisation or person named on the front page – no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
is valid only within the UK
has to be read, considered and used as a whole document – it may be misleading and will be incomplete to be selective
is copyright of the BBA
is subject to English Law.

2 Publications, documents, specifications, legislation, regulations, standards and the like referenced in this Certificate are those that were current and/or deemed relevant by the BBA at the date of issue or reissue of this Certificate.

3 This Certificate will be displayed on the BBA website, and the Certificate Holder is entitled to use the Certificate and Certificate logo, provided that the product and its manufacture and/or fabrication, including all related and relevant parts and processes thereof:

are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine
are reviewed by the BBA as and when it considers appropriate.

4 The BBA has used due skill, care and diligence in preparing this Certificate, but no warranty is provided.

5 In issuing this Certificate the BBA is not responsible and is excluded from any liability to any company, firm, organisation or person, for any matters arising directly or indirectly from:

the presence or absence of any patent, intellectual property or similar rights subsisting in the product or any other product
the right of the Certificate holder to manufacture, supply, install, maintain or market the product
actual installations of the product, including their nature, design, methods, performance, workmanship and maintenance
any works and constructions in which the product is installed, including their nature, design, methods, performance, workmanship and maintenance
any loss or damage, including personal injury, howsoever caused by the product, including its manufacture, supply, installation, use, maintenance and removal
any claims by the manufacturer relating to UKCA, UKNI or CE marking.

6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product which is contained or referred to in this Certificate is the minimum required to be met when the product is manufactured, supplied, installed, used, maintained and removed. It does not purport in any way to restate the requirements of the Health and Safety at Work etc. Act 1974, or of any other statutory, common law or other duty which may exist at the date of issue or reissue of this Certificate; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any statutory, common law or other duty of care.