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**Agrément
Certificate
No 06/4332**

Designated by Government
to issue
European Technical
Approvals

EAGLEY CAVITY CLOSER AND FRAME ACCEPTOR SYSTEM

Patron/Élément de remplissage
Chablone/Hohlraumfüllelement

Product




• THIS CERTIFICATE RELATES TO THE EAGLEY CAVITY CLOSER AND FRAME ACCEPTOR SYSTEM, A PVC-U CAVITY CLOSER AND WINDOW OR DOOR ACCEPTOR USED AS A TEMPLATE TO FORM AN OPENING IN MASONRY CAVITY WALLS DURING CONSTRUCTION AND CAN PROVIDE VENTILATION VIA THE HEAD VENT SECTION.

• The system closes the cavity at openings, without forming a thermal bridge, and provides a damp-proof barrier between inner and outer wall leaves at the point of closure.

continued

Regulations

1 The Building Regulations 2000 (as amended) (England and Wales)

 The Secretary of State has agreed with the British Board of Agrément the requirements of the Building Regulations to which cavity closers can contribute in achieving compliance. In the opinion of the BBA, the Eagley Cavity Closer and Frame Acceptor System, if used in accordance with the provisions of this Certificate, will meet or contribute to meeting the relevant requirements.

Requirement: C2(b)	Resistance to moisture
Comment:	The system prevents the passage of moisture from the outer leaf to the inner leaf of a cavity wall at window or door openings. See sections 11.1 and 11.2 of this Certificate.
Requirement: C2(c)	Resistance to moisture
Comment:	The system can contribute to meeting this Requirement. See sections 10.1 to 10.3 of this Certificate.
Requirement: F1	Means of ventilation
Comment:	Background ventilation can be provided. See section 7.5 of this Certificate.
Requirement: L1(a)(i)	Conservation of fuel and power
Comment:	The system contributes to minimising heat loss at jambs and sills. See section 10.1 of this Certificate.
Requirement: Regulation 7	Materials and workmanship
Comment:	The system is acceptable. See section 15 of this Certificate.

continued

- The system is for use in masonry cavity walls with cavity widths in the range 50 mm to 100 mm, and with PVC-U windows.
- Door frames must be fixed independently to the masonry. Proprietary fixings which may be recommended by the manufacturer for this purpose are outside the scope of this Certificate.
- It is essential that the system is installed and used in accordance with the conditions set out in the Design Data and Installation parts of this Certificate.

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In addition to the contribution which the product can make to meeting the relevant requirements, the following comments should be noted:

Requirement: A1	Loading
Comment:	When used in conventional masonry cavity walls, the system will not adversely affect the structural stability of the walls. Use of the product does not obviate the need for conventional wall ties between the inner and outer leaves at window and door openings. Door frames require additional fixings using proprietary lugs or frame fixings.
Requirement: B3(4)	Internal fire spread (structure)
Comment:	The system can be used in constructions that meet this Requirement. The product is acceptable. See sections 12.1 to 12.3 of this Certificate.

2 The Building (Scotland) Regulations 2004



In the opinion of the BBA, the Eagley Cavity Closer and Frame Acceptor System, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Regulations and related Mandatory Standards as listed below.

Regulation: 8	Fitness and durability of materials and workmanship
Regulation: 8(1)	Fitness and durability of materials and workmanship
Comment:	The system can contribute to a construction satisfying this Regulation. See section 15 and the <i>Installation</i> part of this Certificate.
Regulation: 9	Building standards – construction
Standard: 1.1(a)(b)	Structure
Comment:	When used in conventional masonry cavity walls the system will not obviate the need for conventional wall ties between the inner and outer leaves at window and door openings, with reference to clause 1.1.1 ⁽¹⁾⁽²⁾ . Door frames require additional fixings using proprietary lugs or frame fixings.
Standard: 2.4	Cavities
Comment:	In conjunction with a cavity barrier, the system can satisfy this Standard, with reference to clause 2.4.1 ⁽¹⁾⁽²⁾ and Annex 2A ⁽¹⁾ . The system does not constitute a cavity barrier. See sections 12.1 to 12.3 of this Certificate.
Standard: 3.10	Precipitation
Comment:	Walls incorporating the system can satisfy this Standard, with reference to clauses 3.10.1 ⁽¹⁾⁽²⁾ and 3.10.3 ⁽¹⁾⁽²⁾ . See sections 11.1 and 11.2 of this Certificate.
Standard: 3.14	Ventilation
Comment:	The system can contribute to satisfying this Standard, with reference to clauses 3.14.5 ⁽¹⁾ and 3.14.3 ⁽²⁾ . See section 7.5 of this Certificate.
Standard: 3.15	Condensation
Comment:	The system can contribute to satisfying this Standard, with reference to clauses 3.15.3 ⁽¹⁾ and 3.15.4 ⁽¹⁾ . See sections 10.1 to 10.3 of this Certificate.
Standard: 6.2	Building insulation envelope
Comment:	Walls incorporating the system can satisfy this Standard, with reference to clauses 6.2.4 ⁽¹⁾⁽²⁾ and 6.2.5 ⁽¹⁾⁽²⁾ . See section 10.1 of this Certificate.
Regulation: 12	Building standards – conversions
Comment:	All comments given for this system under Regulation 9, 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).

3 The Building Regulations (Northern Ireland) 2000



In the opinion of the BBA, the position of the Eagley Cavity Closer and Frame Acceptor System, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Building Regulations listed below.

Regulation: B2	Fitness of materials and workmanship
Comment:	The system is acceptable. See section 15 of this Certificate.
Regulation: C4	Resistance to ground moisture and weather
Comment:	Walls incorporating the system can contribute to meeting this Regulation. The former can be used where checked reveals are required. See sections 11.1 and 11.2 of this Certificate.

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Regulation:	C5	Condensation
Comment:		The system can contribute to satisfying this Regulation. See section 10.3 of this Certificate.
Regulation:	D1	Stability
Comment:		When used in conventional masonry cavity walls, the system will not obviate the need for conventional wall ties between the inner and outer leaves at around window and door openings. Door frames require additional fixings using proprietary lugs or frame fixings.
Regulation:	E4	Internal fire spread — Structure
Comment:		The system does not constitute a cavity barrier. See sections 12.1 to 12.3 of this Certificate.
Regulation:	F2	Building fabric
Comment:		The system contributes to minimising heat loss at jambs and sills. See sections 10.1 and 10.2 of this Certificate.
Regulation:	K2	Means of ventilation
Comment:		Trickle ventilation can be provided. See section 7.5 of this Certificate.

4 Construction (Design and Management) Regulations 1994 (as amended) Construction (Design and Management) Regulations (Northern Ireland) 1995 (as amended)

In the opinion of the BBA there is no information in this Certificate which relates to the obligations of the client, planning supervisor, designer and contractors under these Regulations.

Technical Specification

5 Description

5.1 The Eagley Cavity Closer and Frame Acceptor System is a white, unplasticised polyvinyl chloride (PVC-U) cavity closer and window acceptor, used to form an opening in masonry cavity walls during construction. It is made from extruded profiles formed into a U-shaped template with welded or mechanically joined (using moulded corner blocks) corners at the sill and a temporary fixing batten fixed at the head, to be removed prior to the installation of the window. Alternatively, a head vent profile is mechanically joined to form the head section.

5.2 The cavity closer components and accessories are listed in Table 1 and shown in Figure 1.

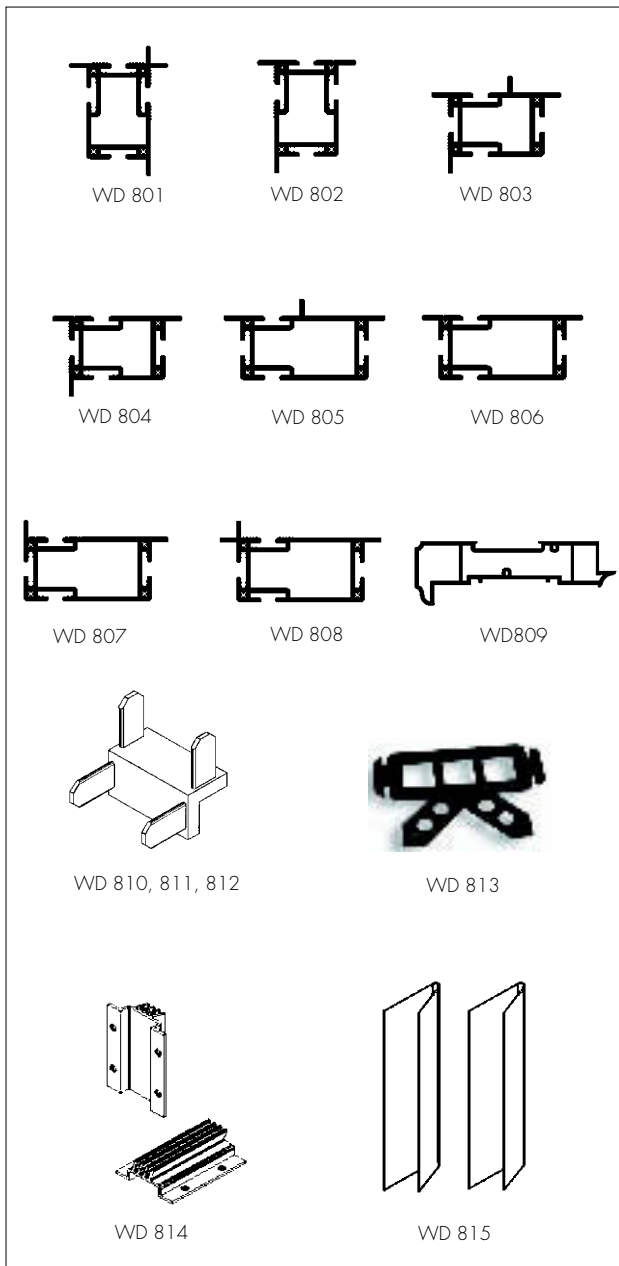
5.3 The system is for use in walls with cavity widths in the range of 50 mm to 100 mm and comprises five main profiles: head section, jamb section, ventilation section, sill section, and rebate upstand (internal bead). Window frame fixing clips (snappers) available in polypropylene or stainless steel and polypropylene (wall) brick ties complete the system.

Table 1 List of components

Manufacturer's designation	Components	Application
WD 801	closer section	external fit/internal fit, 50/75 mm jamb/sill
WD 802	closer section	flush fit/internal fit/check reveal, 50/75 mm jamb/sill/flush fit
WD 803	closer section	external fit, 75 mm sill/jamb
WD 804	closer section	internal fit/flush fit/check reveal, 50/75 mm jamb/sill/flush fit
WD 805	closer section	external fit, 100 mm sill/jamb
WD 806	closer section	internal fit/check reveal/flush fit, 100 mm sill/flush fit
WD 807	closer section	check reveal, 100 mm jamb
WD 808	closer section	internal fit, 100 mm jamb
WD 809	head vent	all sizes
WD 810	corner block	50 mm
WD 811	corner block	75 mm
WD 812	corner block	100 mm
WD 813	brick tie	all sizes
WD 814	plastic snapper	window fixing
WD 815	stainless steel snapper	window fixing

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Figure 1 Components



5.4 The cavity closer profiles are produced by conventional extrusion techniques from re-ground PVC-U material. The head vent profile visible faces are co-extruded white PVC-U virgin material. The virgin and re-ground materials comply with Case B (PVC-U with additional polymers) as defined in MOAT No 17 : 1990.

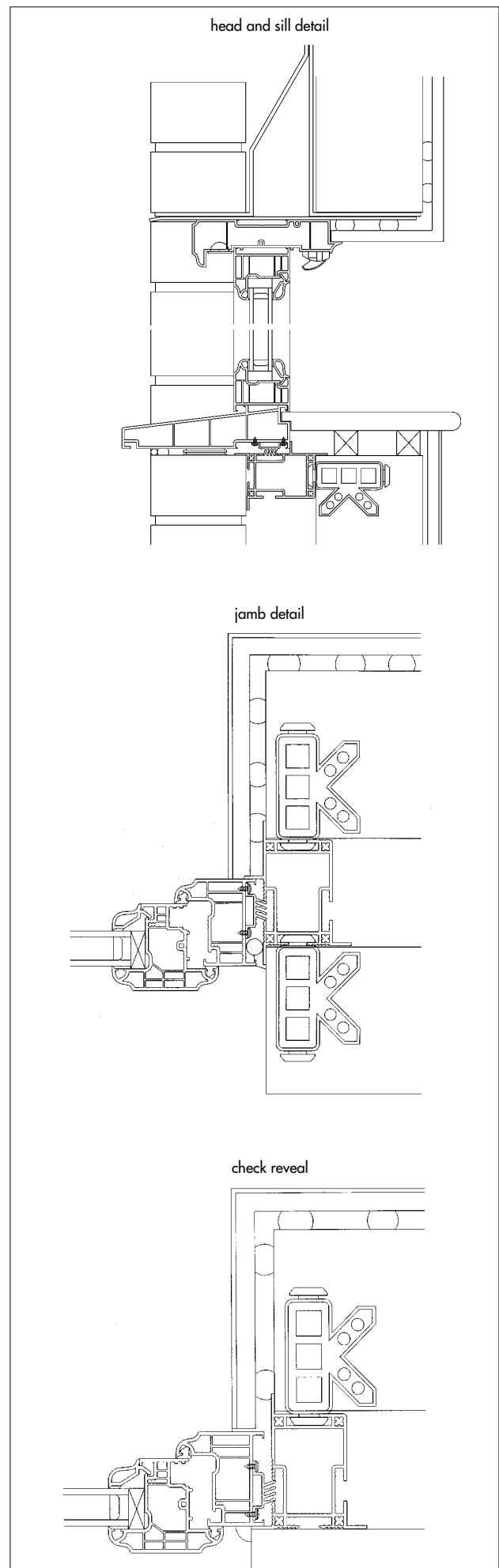
5.5 Polypropylene mortar ties, manufactured by standard injection moulding techniques, are used to build the cavity closer into the surrounding mortar joints (see Figure 2).

5.6 The use of the system eliminates the need for fitting a conventional vertical or horizontal damp-proof course to the window system.

5.7 The system can be used in a checked reveal construction.

5.8 For doors and windows, the maximum cavity closer aperture size is 3000 mm wide by 2100 mm high.

Figure 2 Typical reveal detail



5.9 Doors require additional proprietary fixings outside the scope of this Certificate.

5.10 Cavity frames are manufactured to suit the exact window size, in accordance with the *Eagley Cavity Closer Technical Manual*. The brick aperture to frame clearance is 7 mm.

5.11 Tests are carried out to monitor the quality of the extrusions.

6 Delivery to site and storage

6.1 Assembled closer frames are labelled with product identification and the BBA identification mark incorporating the number of this Certificate. They are dispatched along with the requisite number of mortar ties, any additional ancillary items and installation instructions.

6.2 The pre-assembled frames are stacked vertically and delivered as individual items, taking care to avoid distortion in transit. The frames should be stored under cover in a clean area, on edge, and suitably supported to avoid distortion or damage. The frames should be protected from vehicular and pedestrian traffic.

Design Data


7 General

7.1 The Eagley Cavity Closer and Frame Acceptor System is suitable for use in masonry walls with cavity widths in the range 50 mm to 100 mm and with window frames made from PVC-U or wood.

7.2 The system provides an effective means of closing a cavity without creating a thermal bridge; a separate vertical damp-proof course is not required, nor is it necessary to cut bricks or blocks. It can be used to form a checked reveal where required and to fit the window after completion of the masonry, as is conventional practice in Scotland and Northern Ireland.

7.3 The system can be used to aid establishment of the cavity widths during wall construction and to form an opening around which a wall can be built.

7.4 Jamb and sills should be finished internally in accordance with the requirements of section 10.1.

 7.5 When the system is used with the head vent section and suitably-sized trickle ventilator, it can contribute to satisfying the background ventilation requirements of the various Building Regulations. Details of ventilators covered by an Agrément Certificate can be found on the BBA website.

8 Practicability of installation

Installation of the system is straightforward and can be carried out by tradesmen using traditional skills.


9 Structural stability

9.1 The system must not be used to support loads from the masonry nor does it replace the need for cavity wall ties. Lintels are required above window or door openings.

9.2 The system will not have an adverse effect on the structural stability of brickwork or blockwork walls, constructed in the conventional manner in accordance with normal good practice as defined in BS 5628-3 : 2005.

9.3 A window fitted correctly into a cavity frame will satisfactorily transfer to the structure, wind loads likely to be encountered in the UK. In terms of wind loading resistance the cavity frame can be used in all areas of the UK.

10 Hygrothermal behaviour

 10.1 Thermal bridging, risk of local surface condensation and air leakage around openings will be acceptable and will meet the following requirements where:

- the window or door frame is set back 30 mm or more into the cavity
- the junctions between the walls and the front and back of the window/door frame are effectively sealed
- jambs and sills incorporating the system must include an internal finish with a thermal resistance of at least $0.15 \text{ m}^2\text{kW}^{-1}$, for example plasterboard on dabs on jambs and 20 mm timber board on sills.

England and Wales

Approved Document L1A, Paragraphs 37, 51 and 52

Approved Document L1B, Paragraphs 52 and 53

Approved Document L2A, Paragraphs 39, 68 and 69

Approved Document L2A, Paragraphs 85 and 86

Scotland

Mandatory Standard 6.2, clauses 6.2.4⁽¹⁾⁽²⁾ and 6.2.5⁽¹⁾⁽²⁾

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).

Northern Ireland

Technical Booklet F, Paragraphs 1.33 and 1.34.

10.2 For constructions not covered by section 10.1, an assessment can be carried out by computer simulation in accordance with BRE Information Paper 1/06 *Assessing the effects of thermal bridging at junctions and around openings*.

10.3 Under normal domestic conditions, the level of interstitial condensation associated with the product will be low and the risk of any resultant damage minimal.

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10.4 For door frame installations where proprietary through fixings are used, the frame cannot be set back in the cavity by 30 mm and therefore additional thermal insulation should be considered, for example by using insulated dry lining, to minimise the risk of condensation and excessive additional heat loss at the reveal.

11 Weather resistance



11.1 The system is effective as a vertical damp-proof barrier at jambs of window and door openings in masonry constructions, where a brick/block closer and dpc detail would normally be used. The product is also effective as a horizontal damp-proof barrier at the sill or threshold.

11.2 The system may also be used to construct a checked reveal (see Figure 2). In this construction, in which the frame is positioned in a rebate behind the outer leaf of the jamb, the product is suitable for use in exposure categories up to and including 'very severe' as defined in Table 10 of BS 5628-3 : 2005, which covers all exposure zones in the United Kingdom.

12 Properties in relation to fire



12.1 The installed system will not contribute significantly to the growth of a fire.

12.2 The system does not constitute a cavity barrier against the penetration of smoke and flame in the context of the Building Regulations. This does not prevent its use in England and Wales where cavity barriers are not normally required around openings in cavity walls. In Scotland, however, the system is only suitable for use in conjunction with a cavity barrier meeting the performance requirements defined in Technical Handbook, Annex 2.B (Domestic), or Annex 2.D (Non-Domestic). In Northern Ireland, reference should be made to Table 3.6, item 10 and paragraph 3.37 of Technical Booklet E.

12.3 The use of the system does not preclude the need to provide suitable fire protection to steel lintels where this is necessary to satisfy the Building Regulations.

13 Security against intrusion

Removal of a window from the cavity frame from outside is virtually impossible as the shape of the outer frame prevents access to the locating tangs. If required, for any reason, supplementary through fixing of the window or door frame is possible. The door frames are secured by lugs or through fixings around the perimeter although the fixings are outside the scope of this Certificate.

14 Maintenance

During the life of the system, no additional maintenance, other than the replacement of

sealants, is envisaged to maintain watertightness in normal use.

15 Durability



The system is formed from materials shown to be durable and, protected within the cavity, will not suffer significant degradation. The product will last the normal expected life of a building. Visible components will have an expected life similar to a PVC-U window.

Installation

16 General

16.1 Installation of the Eagley Cavity Closer and Frame Acceptor System must be carried out in accordance with the *Eagley Cavity Closer System Technical Manual*.

16.2 Reference should be made to the typical installation details shown in Figure 2, when reading the installation details given in section 17. The windows in this Figure are shown for information only and do not form part of this assessment.

16.3 At the build-in stage it must be ensured that the cavity frame remains plumb, level, square and with parallel sides.

17 Procedure

17.1 The cavity frame is supplied to site as a complete frame with the joints between the jambs and sill sections welded together and head section screwed in place at the head, ready for building into the construction of cavity walls using traditional building methods.

17.2 The cavity wall is built to the sill/threshold level, ensuring that the coursework is level, flat, and that all excess mortar is removed.

17.3 The cavity closer frame is positioned in the cavity and temporary timber supports are attached to the closer, if required. The closer frame is aligned with a spirit level and the timber supports are secured so that they are rigid and will keep the frame square and plumb.

17.4 The mortar ties are locked into the channel of the cavity frame jambs and built into the mortar bed joints at 300 mm centres. The ties should be inserted alternately, tying the frame into both inner and outer courses. A minimum of three ties per vertical member is required.

17.5 When the masonry reaches head level the head batten and any bracing support or corner brackets are removed and a lintel, with associated dpc, is fitted across the masonry to butt onto the top of the jamb profiles. The wall construction is continued to complete the aperture.

17.6 The head of the cavity closer is secured to the lintel with screws.

17.7 In all installations the top brick course should be arranged to ensure that, when bedded in, the lintel does not exert a load on the window or door frame.

17.8 The fitting of windows or doors to the cavity frame must be carried out in accordance with the *Eagley Cavity Closer System Technical Manual*.

17.9 For internal plastering around window and door reveals, the use of dry lining is recommended (see section 10.1).

17.10 Finishing trims are fitted after completion of the window or door installation, where required.

17.11 The window is effectively sealed, using a suitable low-modulus silicone sealant.

Technical Investigations

The following is a summary of the technical investigations carried out on the Eagley Cavity Closer and Frame Acceptor System.

18 Tests

18.1 Tests were carried out in accordance with MOAT 17 : 1990, to determine the following:

- *PVC-U extrusions, made from re-ground material*
 - shrinkage on heating
 - gelation by heating
 - tensile impact
 - resistance to UVA.
- *frame fixing clips*
 - stress relief of polypropylene injection moulded frame fixing clips.

18.2 Tests were carried out in accordance with the methods defined in MOAT No 1 : 1974, on a combined cavity closer frame and PVC-U window, installed in a test rig, to determine:

- watertightness
- air permeability
- effect of cyclic wind loads to ± 1250 Pa
- effect of temperature variation (-5°C to 55°C) on resistance to wind loading
- resistance to wind loads of 3000 Pa at a temperature of -5°C (safety test).

19 Investigations

An assessment was made of:

- durability of the components used in the construction of the product
- weathertightness of the product when installed in accordance with the manufacturer's instructions
- fire resistance and structural stability of walls incorporating the cavity closer
- hygrothermal properties of constructions incorporating the product. In making this assessment, reference was made, as appropriate, to the 'Robust Construction Details'⁽¹⁾, BRE report (BR 262 : 2002) *Thermal Insulation : Avoiding risks* and BRE Information Paper IP 12/94 *Assessing condensation risk and heat loss at thermal bridges around openings*
- the manufacture and quality control of the extruded profiles and cavity closer frame production.

- (1) *Limiting thermal bridging and air leakage : Robust construction details for dwellings and similar buildings*. TSO 2002.

Bibliography

BS 5628-3 : 2005 *Code of practice for the use of masonry — Materials and components, design and workmanship*

MOAT No 1 : 1974 *Directive for the Assessment of Windows*

MOAT No 17 : 1990 *UEAtc Technical Guide for the Agrément of windows in PVC-U*

Conditions of Certification

20 Conditions

20.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is granted only to the company, firm or person named on the front page — no other company, firm or person may hold or claim any entitlement to this Certificate
- 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.

20.2 References in this Certificate to any Act of Parliament, Regulation made thereunder, Directive or Regulation of the European Union, Statutory Instrument, Code of Practice, British Standard, manufacturers' instructions or similar publication, are references to such publication in the form in which it was current at the date of this Certificate.

20.3 This Certificate will remain valid for an unlimited period provided that the product/system and the manufacture and/or fabrication including all related and relevant 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.

20.4 In granting this Certificate, the BBA is not responsible for:

- the presence or absence of any patent, intellectual property or similar rights subsisting in the product/system or any other product/system
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product/system
- individual installations of the product or system, including the nature, design, methods and workmanship of or related to the installation
- the actual works in which the product/system is installed, used and maintained, including the nature, design, methods and workmanship of such works.

20.5 Any information relating to the manufacture, supply, installation, use and maintenance of this product/system which is contained or referred to in this Certificate is the minimum required to be met when the product/system is manufactured, supplied, installed, used and maintained. It does not purport in any way to restate the requirements of the Health & Safety at Work etc Act 1974, or of any other statutory, common law or other duty which may exist at the date of this Certificate or in the future; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any present or future statutory, common law or other duty of care. In granting this Certificate, the BBA does not accept responsibility to any person or body for any loss or damage, including personal injury, arising as a direct or indirect result of the manufacture, supply, installation, use and maintenance of this product/system.



In the opinion of the British Board of Agrément, the Eagley Cavity Closer and Frame Acceptor System is fit for its intended use provided it is installed, used and maintained as set out in this Certificate. Certificate No 06/4332 is accordingly awarded to Eagley Plastics Ltd.

On behalf of the British Board of Agrément

Date of issue: 28th June 2006

Chief Executive