BEAL Appraisal Certificate

APPRAISAL #: CA2302 R2

EXPIRY DATE: 31 Mar 2027

The 18mm & 10mm Cavibat Cavity Battens

Product

1.1 The 18mm and 10mm Cavibat Cavity Battens are a well-proven means for establishing a drained and ventilated cavity behind a cladding or roof.

1.2 The Cavibat Cavity Battens are constructed from durable, fluted extruded polypropylene lengths that provide excellent compression resistance and water drainage through the flutes.

1.3 The Cavibat Cavity Battens can be installed by any suitably experienced tradesperson, within the scope and limitations described in this Appraisal.

NZ Building Regulations

2.1 In the opinion of BEAL, the Cavibat Cavity Battens, when designed and installed in accordance with the statements and conditions of this Appraisal Certificate, will meet the following provisions of the New Zealand Building Code:

Clause B1 MECHANICAL PROPERTIES
The Cavibat Cavity Battens meet the requirements of Performance B1.3.3 (h). (Refer para 6.3)

Clause B2 DURABILTY
Performance B2.3.1 (b) 15 years for new or repair work. The Cavibat Cavity Battens will meet this requirement. (Refer para 6.4)

Clause E2 EXTERNAL MOISTURE
Performance E2.3.1. The Cavibat Cavity Battens will meet this requirement. (Refer para 6.5)

Clause F2 HAZARDOUS BUILDING MATERIALS
Performance F2.3.1. The Cavibat Cavity Battens will not present a health hazard to people. (Refer para 6.6)

2.2 The Cavibat Cavity Battens have been appraised as an 'Alternative Solution' in terms of compliance with the New Zealand Building Code.

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Scope and Limitations

3.1 The Cavibat Cavity Battens have been appraised for use as a non-structural cavity batten for use with cladding and roof systems on buildings within the following scope:

- the scope limitations of NZBC Acceptable Solution E2/AS1; and,
- with a risk score of 0–20, calculated in accordance with Acceptable Solution E2/AS1, Table 2; and,
- with cavity-based cladding and roofing systems complying with the NZBC
- situated in Wind Zones up to and including 'Extra High' as defined within NZS3604.

Cavibat Cavity Battens may also be used on buildings subject to SED (Specific Engineer Design) to suit specific site conditions.

The weathertightness of a cladding or roof system incorporating the Cavibat Cavity Battens, including all construction details, is the responsibility of the specifier or designer and is outside the scope of this literature.

The specifier or designer must ensure that the all construction details meet the performance requirements of the NZBC.

Technical Literature

4.1 The Cavibat Cavity Battens Technical Literature, **Fourth Edition,** must be read in conjunction with this Appraisal. All aspects of design, use, installation and maintenance contained within the Technical Literature and scope of this Appraisal Certificate must be followed.

4.2 For a copy of this Technical Literature, please contact Cavity Batten Systems Ltd.

Technical Details

5.1 The Cavibat Cavity Batten is an extruded fluted batten product designed for use as a non-structural cavity batten in cavity-based cladding and roof systems. The Cavibat Cavity Batten creates an 18 mm cavity, used to provide a secondary drainage plane by separating the cladding or roofing drainage plane from the protection over the external wall framing, as well as providing an unobstructed path for any possible ingress of water that may get past the cladding or roofing.

Cavibat Cavity Battens

5.2 Cavibat Cavity Battens are manufactured from very durable extruded polypropylene. The battens are cut after extruding to a finished size of approximately 45 mm wide by 18 mm or 10mm thick. The battens are supplied in 1200 mm long lengths.

Cavibat Cavity Battens are designed to enable exposure to the weather for up to 60 days.

Handling and Storage

5.3 Cavibat Cavity Battens must be protected from direct sunlight and physical damage, and should be stored flat and under cover.

Advice for designers

General

6.1 The specifier for the building project must ensure that Cavibat installation is in accordance with the guidance given within this Literature and is suitable for the intended application and that additional detailing is provided for specific design or any areas that fall outside the scope and specifications of this Literature.

Drained and Vented Cavities

6.2 Cavity Battens can be used to form drained cavities as described in Acceptable Solution E2/AS1, Paragraph 9.1.8.2, except that Cavibat Cavity Battens can also be installed continuously in a horizontal orientation, since ventilation and drainage is permitted through the batten flutes.

For installations on buildings within the scope of this Literature, there is no requirement to restrict airflow at external and internal wall corners. Cavibat Cavity Battens do not prevent airflow into the roof space. The cavity must be sealed off from the roof space to meet code compliance with NZBC Clause E2.3.5.

That is, "concealed spaces and cavities in buildings must be constructed in a way that prevents external moisture being accumulated or transferred and causing condensation, fungal growth, or the degradation of building elements".

Cavibat Cavity Battens do not provide vermin proofing to the bottom of the drained cavity. A suitable cavity vent strip must be installed as part of the selected cladding or roofing system.

Product Compatibility

6.3 Cavibat Cavity Battens are compatible with all wood based, fibre cement, polystyrene based, metal and uPVC cladding products and kraft paper based and synthetic building wraps and underlays.

Building Wrap or Underlay Support

6.4 Where the Cavibat Cavity Battens are installed vertically or horizontally at greater than 450 mm centres, a building wrap or underlay support, such as described in Acceptable Solution E2/AS1 Paragraph 9.1.8.5, must be installed over the building wrap or underlay, behind the cavity battens to prevent bulging of the building wrap into the drainage cavity.

Structure

6.5 The Cavibat Cavity Batten must be treated as a non-structural packer only. Fixings to fix the Cavibat Cavity Batten to the framing shall be of sufficient length to suit the thickness of the cavity batten alone.

If the Cavibat Cavity Batten is to be used with a cladding system that was originally direct fixed, the fixing length must be increased by a minimum of 18 mm to ensure minimum framing penetration is achieved.

Framing Tolerances

6.6 In order to achieve aesthetically pleasing cladding or roofing finishes, it is imperative that framing is straight and true. Framing tolerances must comply with the requirements of NZS 3604:1999.

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Installation Requirements

System Installation

7.1 The selected building wrap or underlay or frame protection system incorporating flexible sill and jamb tapes must be installed in accordance with the manufacturer's instructions prior to the installation of the Cavibat Cavity Battens.

7.2 Cavibat Cavity Battens may be cut on site with a knife or hand saw. The battens must be installed in continuous lengths and may be installed vertically and/ or horizontally to suit the requirements of the selected cladding or roofing.

Where studs are at greater than 450mm centres, a building wrap or underlay support must be installed over the building wrap.

Cladding or Roofing Installation

7.3 As explained under Para 6.5, the Cavibat Cavity Batten must be treated as a non-structural packer only. Fixing lengths for the cladding material must be as required for non-structural timber cavity battens. Cladding or roofing fixings must be installed through the cavity batten onto the studs and noggins or pulins in accordance with the instructions of the cladding or roofing manufacturer.

Suitable Installers

The Cavibat Cavity Battens must be installed by suitably experienced tradespersons, under the supervision of a LBP.

Basis of this Appraisal

BEAL uses the compliance verification procedure to demonstrate compliance with the relevant clauses of the NZBC based on a risk analysis procedure. The following is a summary of the technical investigations carried out:

Assessments

8.1 The following assessments of the Cavibat Cavity Battens have been undertaken by BEAL:

Review of test data and technical literature supplied by Cavity Batten Systems Ltd.

Testing

8.2 The following testing of the Cavibat Cavity Battens has been undertaken by BEAL and BRANZ:

- Durability by way of measurement of compression resistance before and after 60 days exposure to the weather
- Water resistance
- Water drainage rate

In-service History

8.3 The Cavibat Cavity Battens has been in use and, when subject to the manufacturer's installation requirements, performed satisfactorily for the past 15 years in New Zealand.

Other investigations included -

8.4

- Ease of installation
- Potential risks of non-performance when being installed
- Any external factors that could affect the quality of the installed product
- The Technical Literature has been examined by BEAL and found to be satisfactory.

Quality

8.5 The manufacture of the Cavibat Cavity Battens has been assessed by BEAL regarding the history and composition of the materials obtained by BEAL and found to be satisfactory.

8.6 The quality of materials, components and accessories supplied by Cavity Batten Systems Ltd. is managed through the use of a Building Product Quality Plan.

8.7 The Cavity Batten Systems Ltd. Building Product Quality Plan, based on a manufacturing quality plan, ensures continuous conformance with the quality requirements from purchase to application by experienced and competent tradespersons.

8.8 Cavity Batten Systems Ltd's Building Product Quality Plan is reviewed and audited at least annually by BEAL or an appointed agent.

8.9 Designers are responsible for the substructure design, and building contractors are responsible for the quality of construction of the substructure or new substrate in accordance with the instructions of the substrate manufacturer and this Appraisal Certificate.

Sources of Information

- The Building Regulations 1992, updated November 2022
- NZS 3604:2011 Timber-framed Buildings
- BEAL Durability Test Report Summary dated 13 March 2023.
- BRANZ Test Report DC17005-01-1 dated 20 January 2023.

Concluding statement

9.1 In the opinion of BEAL, the Cavibat Cavity Battens product is fit for purpose and will comply with the NZBC to the extent specified provided that it is used, designed, installed and maintained in accordance with the manufacturer's instructions and this Appraisal Certificate.

The Appraisal Certificate is issued only to Cavity Batten Systems Ltd., and is valid until further notification, subject to the conditions of this Appraisal.

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Conditions of Appraisal

10.1. This appraisal Certificate:
a) Relates only to the Cavibat Cavity Battens as described herein
b) Must be read, considered and used in full, together with the current version of the Technical Literature
c) Does not address any legislation, regulations, codes or standards, not specifically named herein
d) Is copyright of BEAL

10.2 The Appraisal Certificate holder continues to meet the quality requirements of the Cavity Batten Systems Ltd. Building Product Quality Plan and has the plan audited and Appraisal Certificate revalidated by BEAL on an annual basis.

10.3 Cavity Batten Systems Ltd. shall notify BEAL and obtain approval of any changes to the product specification or quality assurance prior to product being marketed including any trade literature, web site info or the like.

10.4 BEAL makes no representation as to:
a) The nature of individual examples of, batches of, or individual installations of the product, including methods and workmanship;
b) The presence or absence of any patent or similar rights subsisting in the product or any other product;
c) Any guarantee or warranty offered by the Appraisal Certificate holder.

10.5 BEAL's verification of the building product or system complying with one or more of the above-mentioned criteria is given on the basis that the criteria used were those that were appropriate to demonstrate compliance with the NZBC at the date of this Appraisal Certificate. In the event that the criteria is withdrawn or amended at a later date, this Appraisal may no longer remain valid.

10.6 Any reference in this Appraisal Certificate to any other publication shall be read as a reference to the version of publication specified in this Appraisal Certificate.

Authorised Signatory,

C R Prouse - Director
BEAL (Building Element Assessment Laboratory Limited)
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