



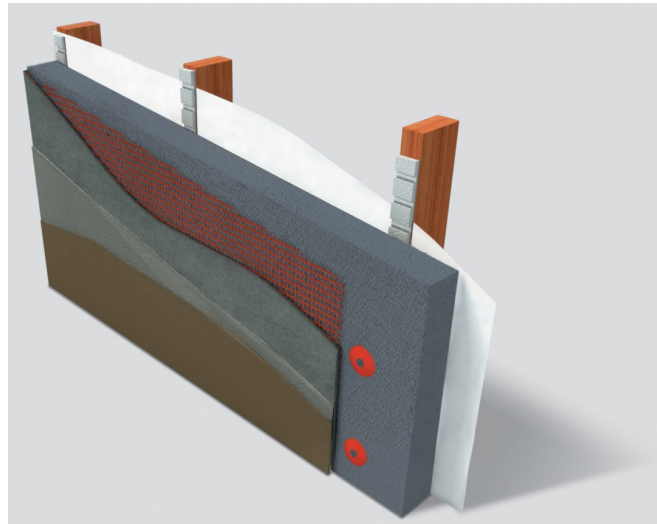
## BRANZ Appraised

Appraisal No. 510 [2026]

## CAVITECLAD EXTERIOR INSULATION AND FINISHING SYSTEM

### Appraisal No. 510 [2026]

This Appraisal replaces BRANZ  
Appraisal No. 510 [2019]



# CaviteClad

EXTERIOR INSULATION AND FINISHING SYSTEM

### BRANZ Appraisals

Technical Assessments of  
products for building and  
construction.



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## Product

- 1.1 Caviteclad Exterior Insulation and Finishing System (EIFS) is a cavity-based external wall cladding system for residential and light commercial type buildings where domestic construction techniques are used.
- 1.2 The system consists of 50 mm [Caviteclad] sheets of either expanded polystyrene [EPS], thermoset phenolic foam, or extruded polystyrene [XPS] or 75 mm [Thermashell] EPS sheets fixed over polystyrene battens to form a cavity. The coating system consists of a 3-4 mm thickness of fibreglass mesh reinforced base coat plaster, followed by the application of 1-2 mm thick finishing plaster, which is then finished with an exterior paint system.

## Scope

### Timber Framing

- 2.1 Caviteclad has been appraised for use as an external wall cladding for timber-framed 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 NZBC Acceptable Solution E2/AS1; and,
  - situated in Wind Zones up to, and including, Extra High determined in accordance with NZS 3604.

### Steel Framing

- 2.2 Caviteclad has been appraised for use as an external wall cladding for steel-framed buildings within the following scope:
  - the scope limitations of NZBC Acceptable Solution E2/AS4 and NASH Building Envelope Solutions; and,
  - with a risk score of 0-20, calculated in accordance with NASH Building Envelope Solutions; and,
  - situated in Wind Zones up to, and including, Extra High determined in accordance with NZS 3604.

### Specific Design

- 2.3 Caviteclad has also been appraised for weathertightness and structural wind loading when used as an external wall cladding system for buildings within the following scope:
  - the scope limitations of NZBC Acceptable Solution E2/AS1 for timber-framed buildings or NASH Building Envelope Solutions for steel-framed buildings; and,
  - constructed with framing subject to specific engineering design; and,
  - situated in specific design wind pressures up to a maximum design differential ultimate limit state [ULS] of 2.5 kPa determined in accordance with AS/NZS 1170.2.



### General

- 2.4 Caviteclad must only be installed vertically over horizontal cavity battens. In all instances, it must be installed on vertical, flat surfaces.
- 2.5 Caviteclad must only be used with window and doors that comply with NZBC Acceptable Solution E2/AS1 or that are covered by a valid BRANZ Appraisal or NZ CodeMark certification.

## Building Regulations

### New Zealand Building Code (NZBC)

- 3.1 In the opinion of BRANZ, Caviteclad Exterior Insulation and Finishing System, if designed, used, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet the following provisions of the NZBC:

**Clause B1 STRUCTURE:** Performance B1.3.1, B1.3.2 and B1.3.4. Caviteclad meets the requirements for loads arising from self-weight, wind, impact and creep [i.e. B1.3.3 (a), (h), (j) and (q)]. See Paragraphs 8.1–8.5.

**Clause B2 DURABILITY:** Performance B2.3.1 (b) 15 years, B2.3.1 (c) 5 years and B2.3.2. Caviteclad meets these requirements. See Paragraphs 9.1–9.3.

**Clause E2 EXTERNAL MOISTURE:** Performance E2.3.2. Caviteclad meets this requirement. See Paragraphs 14.1–14.5.

**Clause F2 HAZARDOUS BUILDING MATERIALS:** Performance F2.3.1. Caviteclad meets this requirement.

## Technical Specification

- 4.1 System components and accessories for Caviteclad, which are supplied by Specialized Construction Products are:

### Foamed Plastic Components

- **Cavity battens** - manufactured from high density (Class H) EPS with a density of no less than 24 kg/m<sup>3</sup>. The battens are 45 mm wide by 21 mm thick and are supplied in 1,200 mm lengths.
- **Caviteclad sheets (option 1)** - 50 mm thick Class S EPS (Neopor®) with a density of no less than 16 kg/m<sup>3</sup>. The sheets are supplied in lengths ranging from 2.4-3.6 x 1.2 m wide and are manufactured to meet the requirements of AS 1366.3.
- **Caviteclad sheets (option 2)** - 50 mm thick rigid thermoset phenolic insulation core, sandwiched between two layers of tissue-based facing (Kooltherm® K5). The sheets are supplied in lengths of 2.4 x 1.2 m wide, and are manufactured to meet the requirements of AS 1366.1.
- **Caviteclad sheets (option 3)** - 50 mm thick XPS (Styroboard®) with a density of no less than 32 kg/m<sup>3</sup>. The sheets are supplied in lengths of 2.2 x 0.6 m wide and are manufactured to meet the requirements of AS 1366.4.
- **Thermashell sheets** - 75 mm thick Class S EPS (Neopor®) with a density of no less than 16 kg/m<sup>3</sup>. The sheets are supplied in lengths of 2.4 x 0.6 m wide and are manufactured to meet the requirements of AS 1366.3.

### Plasters

- **Coarse Mesh Coat (cement-based mesh coat)** - a polymer-modified, Portland cement-based plaster supplied in 20 kg bags that is mixed on-site with clean water. It is applied as the base coat in a minimum 2-3 mm layer followed by the embedment of fibreglass mesh reinforcement in the outer surface.
- **Powaflex (polymer-based mesh coat)** - a fibre-reinforced acrylic plaster supplied in 20 kg bags that is mixed on-site with clean water. It is applied as the base coat in a minimum 2-3 mm layer followed by the embedment of fibreglass mesh reinforcement in the outer surface.



- **Fine Mesh Coat** - a polymer-modified, Portland cement-based plaster supplied in 20 kg bags that is mixed on-site with clean water. It is applied as the base coat around window and door penetrations in a minimum 2-3 mm layer followed by the embedment of fibreglass mesh reinforcement in the outer surface. It is also used to achieve a heavy stucco texture finish when sprayed through a hopper gun or sagola gun.
- **Float Finish** - a polymer-modified, Portland cement-based finishing plaster supplied in 20 kg bags that is mixed on-site with clean water. It is trowel-applied in two coats [1-2 mm per layer] over the mesh coat and is polished flat to achieve a fine granular finish.
- **Spanish Finish** - a polymer-modified, Portland cement-based finishing plaster supplied in 20 kg bags that is mixed on-site with clean water. It is trowel-applied to achieve an undulating style finish.
- **Dulux Acratex Acrylic Texture** - a ready-to-use, synthetic resin-based render which is polished flat to achieve a fine granular finish. It is supplied in 15 L pails.

#### Accessories

- **Reinforcing mesh** - alkali-resistant fibreglass mesh with a nominal mesh size of 4 mm square and a weight of 150 g/m<sup>2</sup> for use in domestic and light commercial situations.
- **uPVC components** - base bead, sill flashing, jamb flashing, head flashing, corner sockets, lipped L-Bead, 50 mm U-Channel, 50 mm high backed U-Channel, 70 mm U-Channel, 20 x 20 L-Bead, 50 x 20 L-Bead and flat U-Channel.

4.2 Accessories specific to the Caviteclad cladding system, which are supplied by the building contractor, are:

- **Caviteclad sheet nail fixings (timber frame)** - 100 x 4 mm hot-dip galvanised flat head nails with 42 mm diameter polypropylene washers. *[Note: Hot-dip galvanising must comply with AS/NZS 4680.]*
- **Caviteclad sheet screw fixings (timber frame)** - 100 mm x 10 g AS 3566 Corrosion Class 4, hot-dip galvanised, countersunk, square-drive wood screws with 42 mm diameter polypropylene washers, or 100 mm x 10 g Grade 304 stainless steel, countersunk, square-drive wood screws with 42 mm diameter polypropylene washers.
- **Thermashell sheet fixings (timber frame)** - 8 g x 120 mm AS 3566 Corrosion Class 4 hot-dip galvanised wood screws in NZS 3604 defined Exposure Zones B, C and D with 42 mm diameter polypropylene washers.
- **Caviteclad sheet and Thermashell sheet fixings (steel frame)** - minimum 6 g AS 3566 Corrosion Class 4 self-drilling screws in NZS 3604 defined Exposure Zones B, C and D with 42 mm diameter washers. The screw length must allow a minimum 10 mm penetration through the steel framing.
- **Cavity batten fixings** - 30 x 2.5 mm hot-dip galvanised steel flat head nails for timber frame, or construction adhesive for fixing to building underlay over timber or steel frame.
- **Thermashell joint adhesive** - EPS compatible self-expanding, moisture cure polyurethane foam adhesive for bonding Thermashell sheet joints during construction.
- **Waterproof membrane tapes** - tapes covered by a valid BRANZ Appraisal or NZ CodeMark Certificate for use as waterproof membranes over the tops of plastered parapets, balustrades, fixing blocks and the like.
- **Adhesive** - EPS compatible adhesive for adhering uPVC components to the Caviteclad sheets and Thermashell sheets as and where required.

4.3 Accessories used with the Caviteclad cladding system to a generic specification in accordance with NZBC Acceptable Solutions E2/AS1, E2/AS4 or covered by a relevant and valid BRANZ Appraisal or NZ CodeMark Certification, which are supplied by the building contractor, are:

- Flexible wall underlay
- Flexible wall underlay restraint
- Rigid wall underlay
- Flexible flashing tape
- Thermal break (steel framing)
- Cavity base closer/vermin strip



- Flexible air seals
- Sill support bars
- Window head flashing
- Flashings
- Sealant

#### **Paint System Specification**

- 4.4 Dulux Acratex 955 Acrashield Advance is a 100% acrylic-based exterior paint formulated for use over Specialized Construction Products cement-based finishing plasters. It is supplied in 10 L pails. At least two coats of Dulux Acratex 955 Acrashield Advance must be used over the finishing plasters to make the system weathertight and give the desired finish colour to exterior walls.
- 4.5 Dulux Acratex Green Render Sealer is used to seal the face of the Dulux Acratex 955 Acrashield Advance paint. It is supplied in 10 L buckets.
- 4.6 The Dulux Acratex 955 Acrashield Advance colours must have a light reflectance value of 40% minimum, regardless of gloss value. Other proprietary paint systems that are not supplied by Specialized Construction Products have not been assessed and are outside the scope of this Appraisal.

### **Handling and Storage**

- 5.1 Handling and storage of all materials supplied by Specialized Construction Products, whether on-site or off-site, is under the control of building contractor and shall be handled according to the requirements in the Technical Literature.
- 5.2 Accessories must be stored so they are kept clean, dry and undamaged. All accessories must be used within the maximum storage period recommended by the manufacturer.

### **Technical Literature**

- 6.1 This Appraisal must be read in conjunction with:
- Caviteclad Installation Guide, dated August 2024.
  - Caviteclad Specification, dated August 2024.
  - Caviteclad details [all prefixed with CAVIT\_N]: 01A, 01B, 01C, 02A, 03A, 04D, 04E, 04F, 04G, 04H, 04I, 04J, 04K, 05A, 05B, 05C, 05D, 05E, 05F, 05G, 05H, 05HA, 06A, 06C, 06D, 07A, 07B, 08A, 08B, 09A, 09AA, 09B, 09BA, 10A, 11A, 12A, 12B, 12C, 13A, 13B, 13C, 14A, 15A, 16A, 16B, 16C, 16D, 17A, 17C, 17D, 17E, 17F, 17G, 17H, 18A, 18B, 18C, 18D, 18E, 18F, 18G, 19A, 19B, 20A, 21A, 22A, 22C, 23A, 24A, 24B, 25A, 26A, 27A, all details Version 01, dated 2021.
  - Thermashell details [all prefixed with THERM\_N]: 01A, 01B, 01C, 01D, 02A, 03A, 04D, 04E, 04F, 04G, 04H, 04I, 04J, 04K, 05A, 05B, 05C, 05D, 05E, 05F, 05G, 05H, 06A, 06C, 06G, 07A, 07B, 08A, 08B, 08C, 09A, 09B, 10A, 11A, 12A, 12B, 12C, 13A, 13B, 13C, 14A, 15A, 16A, 16B, 16C, 17A, 17B, 17C, 17D, 17E, 17F, 17G, 17H, 18A, 18B, 18C, 18D, 18E, 18F, 18G, 19A, 19B, 20A, 21A, 22A, 22C, 23A, 24A, 24B, 25A, 26A, 27A, all details Version 01, dated 2021.
- 6.2 All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

### **Design Information**

#### **Timber Treatment**

- 7.1 Timber framing must be treated as required by NZBC Acceptable Solution B2/AS1.

#### **Timber Framing**

- 7.2 Timber framing must comply with NZS 3604 for buildings or parts of buildings within the scope limitations of NZS 3604. Buildings or parts of buildings outside the scope of NZS 3604 must be to a specific design in accordance with NZS 3603 and AS/NZS 1170. Where specific design is required, the framing must be of at least equivalent stiffness to the framing provisions of NZS 3604.

- 7.3 For buildings situated in NZS 3604 defined Wind Zones up to, and including, Very High, studs must be at maximum 600 mm centres. For all other buildings, studs must be at maximum 400 mm centres. Dwargs must be fitted flush between the studs at maximum 800 mm centres.
- 7.4 The maximum moisture content of timber framing must be in accordance with NZBC Acceptable Solution E2/AS1.

#### **Steel Framing**

- 7.5 Steel framing must comply with NASH Standard Part Two for buildings or parts of buildings within the scope limitations of NASH Standard Part Two. Buildings or parts of buildings outside the scope of NASH Standard Part Two must be to a specific design. Where specific design is required, the framing must be of at least equivalent stiffness to the framing provisions of NASH Standard Part Two.
- 7.6 The minimum framing specification is 'C' section studs and noggs/dwargs of overall section size of 75 mm web and 32 mm flange. Steel thickness must be minimum 0.55 mm and a minimum grade G2.
- 7.7 Studs must be at maximum 600 mm centres in Low, Medium, High and Very High Wind Zones and maximum 400 mm centres for the NASH Building Envelope Solutions Extra High Wind Zone and specifically designed buildings, with noggs/dwargs fitted flush between the studs at maximum 600 mm centres.

#### **EPS Sheet Conditioning**

- 7.8 Caviteclad sheets or Thermashell sheets must be properly kiln dried or allowed to release their surface tension by sitting for 2 months prior to installation, otherwise cupping problems may occur at a later date due to excessive tension and or shrinkage within the backing substrate.

#### **Caviteclad 50 mm Sheet Setout for EPS and Phenolic Resin Sheets**

- 7.9 All vertical sheet edges must be supported and fixed through the cavity battens to the framing. Horizontal sheet edges must be supported at fixing locations with cavity spacers that comply with the requirements of NZBC Acceptable Solution E2/AS1. The detail at the base of the wall must comply with the requirements of NZBC Acceptable Solution E2/AS1.
- 7.10 Additional battens and framing will be required at soffits, internal and external corners and window and door openings for the support and fixing of sheet edges.

#### **Caviteclad 50 mm XPS and Thermashell 75 mm Sheet Setout**

- 7.11 Sheets must be installed horizontally. Vertical and horizontal sheet joints must be bonded with Thermashell joint adhesive during installation. Vertical sheet edges may be jointed on-stud or off-stud. Horizontal sheet edges do not require edge fixing, except at soffits and window and door openings where additional framing will be required for the support and fixing of sheet edges. Vertical sheet joints must be staggered by a minimum of 200 mm each row. Thermashell sheets must be supported at fixing locations with vertical cavity battens or cavity spacers that comply with the requirements of NZBC Acceptable Solution E2/AS1. The detail at the base of the wall must comply with the requirements of NZBC Acceptable Solution E2/AS1.

#### **General**

- 7.12 When Caviteclad is used for specifically designed buildings up to design differential 2.5 kPa ULS wind pressure, only the weathertightness aspects of the cladding and maximum framing centres and Caviteclad sheet and Thermashell sheet fixing centres are within the scope of this Appraisal. All other aspects of the building need to be specifically designed and are outside the scope of this Appraisal.
- 7.13 Ground clearance to finished floor levels as set out in NZS 3604 must always be adhered to.
- 7.14 The horizontal separation between the wall cladding and the adjacent ground must be maintained in accordance with NZS3604.
- 7.15 The bottom of cladding must have separations, clearances and overlaps in accordance with NZBC Acceptable Solution E2/AS1.



- 7.16 All external walls shall have barriers to airflow in accordance with NZBC Acceptable Solution E2/AS1 and for specifically designed buildings up to a 2.5 kPa design differential ULS wind pressure a rigid underlay is required.
- 7.17 Penetrations through the Caviteclad cladding system shall be in accordance with NZBC Acceptable Solution E2/AS1 and the Technical Literature.
- 7.18 Inter-storey junctions in claddings are required in accordance with NZBC Acceptable Solution E2/AS1 and shall be detailed in accordance with the Technical Literature.
- 7.19 Where Caviteclad abuts other cladding systems, designers must detail the junction to meet their own requirements and the performance requirements of the NZBC. The Technical Literature provides guidance for using the Caviteclad cladding system at junctions. Details not included with the Technical Literature have not been assessed and are outside the scope of this Appraisal.

#### **Electrical Cables**

- 7.20 PVC sheathed electrical cables must be prevented from direct contact with the foam backing substrate that is used for the Caviteclad system. When cables must penetrate the foam sheets for exterior electrical connections, the cable must be directly supported by passing through an electrical conduit.

#### **Control Joints**

- 7.21 Control joints must be constructed in accordance with the Technical Literature, and be provided as follows:
- Horizontal control joints – at maximum 6 m centres.
  - Vertical control joints – at maximum 20 m centres; aligned with any control joint in the structural framing; where the system abuts different cladding types, or where the system covers different structural materials.

*[Note: Horizontal and vertical control joints must be located over structural supports. The Technical Literature provides some guidance for the design of vertical control joints where the system abuts different cladding types. Details not included within the Technical Literature are outside the scope of this Appraisal and are the responsibility of the designer, refer to Paragraph 7.18.]*

### **Structure**

#### **Mass**

- 8.1 The mass of the Caviteclad system incorporating Caviteclad sheets or Thermashell sheets is approximately 7 kg/m<sup>2</sup> and is therefore considered a light wall cladding in terms of NZS 3604 and NASH Standard Part 2.

#### **Impact Resistance**

- 8.2 The Caviteclad cladding system has good resistance to impact loads likely to be encountered in normal residential use. The likelihood of impact damage to the system when used in light commercial situations should be considered at the design stage, and appropriate protection such as the installation of bollards and barriers should be considered for vulnerable areas.

#### **Wind Zones**

- 8.3 The Caviteclad cladding system has been appraised for use in all Wind Zones of NZS 3604 up to, and including, Extra High, where buildings are designed to meet the requirements of NZBC Acceptable Solution E2/AS1 or NASH Building Envelope Solutions or up to design differential 2.5 kPa ULS wind pressure when the buildings are specifically designed.

#### **Caviteclad Sheet Fixing**

- 8.4 Caviteclad sheets must be fixed through the cavity battens and cavity spacers to the wall framing at maximum centres specified in Table 1 and Table 3.

#### **Thermashell Sheet Fixing**

- 8.5 Thermashell sheets must be fixed through the cavity battens and cavity spacers to the wall framing at maximum centres specified in Table 2 and Table 3.



**Table 1: Caviteclad EPS and Phenolic Resin Sheet Fixing Centres for Edges and Intermediate Studs**

NZS 3604 Wind Zone with studs at maximum 600 mm centres	Maximum fixing centres [mm]
Low	300 <sup>1</sup>
Medium	300 <sup>1</sup>
High	300 <sup>1</sup>
Very High	200 <sup>2</sup>

1. One fixing is required into each dwang and top and bottom plates at mid-dwang length.
2. Fixings are also required into each dwang at 200 mm centres and top and bottom plates at mid-dwang length.

**Table 2: Caviteclad XPS and Thermashell Sheet Fixing Centres for Edges and Intermediate Studs**

NZS 3604 Wind Zone with studs at maximum 600 mm centres	Maximum fixing centres [mm]
Low	300 <sup>1</sup>
Medium	300 <sup>1</sup>
High	300 <sup>1</sup>
Very High	200 <sup>2</sup>

1. One fixing is required into each dwang and top and bottom plates at mid-dwang length.
2. Fixings are also required into each dwang at 200 mm centres and top and bottom plates at mid-dwang length.

**Table 3: Caviteclad Sheet and Thermashell Sheet Fixing Centres for Edges and Intermediate Studs – NZS 3604 Wind Zone Extra High and Specific Design Wind Zones**

NZS 3604 Wind Zone Extra High and specifically designed buildings up to 2.5 kPa ULS wind pressure with studs at maximum 400 mm centres		
Maximum vertical fixing centres [mm] along studs	Maximum horizontal fixing centres [mm] along top and bottom plates	Maximum horizontal fixing centres [mm] along dwangs
150	200	150

### Durability

- 9.1 Caviteclad meets the performance requirements of NZBC Clause B2.3.1 [b] 15 years for the cladding system and plaster finish, and the performance requirements of NZBC Clause B2.3.1 [c] 5 years for the exterior paint system.

### Serviceable Life

- 9.2 Caviteclad is expected to have a serviceable life of at least 30 years provided the system is maintained in accordance with this Appraisal, and the Caviteclad sheets, Thermashell sheets, fixings and plaster are continuously protected by a weathertight coating and remain dry in service.
- 9.3 Microclimatic conditions, including geothermal hot spots, industrial contamination and corrosive atmospheres, and contamination from agricultural chemicals or fertilisers can convert mildly corrosive atmosphere into aggressive environments for fasteners. The fixing of Caviteclad in areas subject to microclimatic conditions requires specific design in accordance with NZS 3604 and is outside the scope of this Appraisal.



### Maintenance

- 10.1 Regular maintenance in accordance with the Technical Literature is essential for Caviteclad cladding system installations to continue to meet the NZBC durability performance provision and to maximise their serviceable life.
- 10.2 Regular cleaning (at least annually) of the paint coating is required to remove grime, dirt and organic growth and to maximise the life and appearance of the coating. Grime may be removed by brushing with a soft brush, warm water and detergent. Recoating of the paint system will be required throughout the life of the plaster system. The interval between recoats will depend on the paint colour, orientation, exposure to airborne contaminants and quality of the application. Recoating will be required at approximately 5-10 yearly intervals, in accordance with the instructions of the chosen paint system manufacturer and Specialized Construction Products.
- 10.3 Annual inspections must be made to ensure that all aspects of the cladding system, including the coating system, plaster, flashings and any sealed joints remain in a weatherproof condition. Any cracks, damaged areas or areas showing signs of deterioration which could allow water ingress, must be repaired immediately. The Caviteclad cladding system must be repaired in accordance with the instructions of Specialized Construction Products.
- 10.4 Minimum ground clearances as set out in this Appraisal and the Technical Literature must be maintained at all times during the life of the system. *[Note: Failure to adhere to the minimum ground clearances given in this Appraisal and the Technical Literature will adversely affect the long-term durability of the Caviteclad cladding system.]*

### Prevention of Fire Occurring

- 11.1 Separation or protection must be provided to the Caviteclad cladding system from heat sources such as fireplaces, heating appliances and chimneys. NZBC Acceptable Solutions C/AS1 and C/AS2 provide methods for separation and protection of combustible materials from heat sources.

### Control of Internal Fire and Smoke Spread

- 12.1 The Caviteclad cladding system includes EPS sheets, phenolic sheets and XPS sheets. When used in ceilings or walls, the insulation, including any surface lining product enclosing the insulation from the adjacent occupied space, must achieve the Group Number for internal surface finish requirements as specified in NZBC Acceptable Solutions C/AS1 or C/AS2.

### Control of External Fire Spread

- 13.1 Refer to NZBC Acceptable Solutions C/AS1, C/AS2 and NZBC and Verification Method C/VM2 for fire resistance rating and control of external fire spread requirements for external walls.

### Vertical Fire Spread

- 13.2 This Appraisal only covers buildings 10 m or less in height. NZBC Functional Requirement C3.2 identifies that external vertical fire spread to upper floors only needs be considered for buildings with a building height greater than 10 m. Control of external vertical fire spread is therefore outside the scope of this Appraisal.

### Horizontal Fire Spread

- 13.3 Where required by NZBC Acceptable Solution C/AS1 or C/AS2, the cladding system will need to be installed over a fire resistance rated (FRR) external wall with the required FRR.

### External Cladding Systems

- 13.4 The Caviteclad cladding system contains wall cladding materials not tested or classified as non-combustible or limited combustible materials.
- 13.5 Cladding materials must comply with the fire performance requirements of NZBC Acceptable Solution C/AS1 or C/AS2 based on the building height, distance of the external wall to the relevant boundary and if the building is sprinklered. The Caviteclad cladding system has not been assessed for use where these requirements apply.



## External Moisture

- 14.1 Caviteclad, when installed in accordance with this Appraisal and the Technical Literature, prevents the penetration of water that could cause undue dampness or damage to building elements.
- 14.2 The drained cavity must be sealed off to restrict air movement between the drained cavity and floor, wall and roof framing; the attic roof space; and subfloor space as required by NZBC Acceptable Solution E2/AS1.
- 14.3 Construction moisture must be managed in accordance with NZBC Acceptable Solution E2/AS1 to ensure construction moisture is not permitted to damage building elements.
- 14.4 The details given in the Technical Literature for weather sealing are based on the design principle of having a first and second line of defence against moisture entry for all joints, penetrations and junctions. The ingress of moisture must be excluded by detailing joinery and wall interfaces as shown in the Technical Literature. Weathertightness details that are developed by the designer are outside the scope of this Appraisal and are the responsibility of the designer for compliance with the NZBC.

## Internal Moisture

### Water Vapour

- 15.1 Caviteclad is not a barrier to the passage of water vapour, and when installed in accordance with this Appraisal and the Technical Literature, will not create or increase the risk of moisture damage resulting from condensation.
- 15.2 Where Caviteclad is installed over a steel frame, a thermal break must be installed to the outside face of each steel member meeting the requirements of NZBC Acceptable Solutions E3/AS1, E2/AS4 and NASH Building Envelope Solutions.
- 15.3 Buildings must be constructed with an adequate combination of thermal resistance and ventilation, and space temperature must be provided to all habitable spaces, bathrooms, laundries and other spaces where moisture may be generated or may accumulate.

## Installation Information

### Installation Skill Level Requirement

- 16.1 All design and building work must be carried out in accordance with the Caviteclad Technical Literature and this Appraisal. Where the work involves Restricted Building Work [RBW] this must be completed by, or under the supervision of, a Licensed Building Practitioner [LBP] with the relevant Licence Class.
- 16.2 Installation and finishing of components and accessories supplied by Specialized Construction Products and the certified plasterers must be completed by trained applicators, certified by Specialized Construction Products.

### System Installation

#### Building Underlay and Flexible Sill and Jamb Tape Installation

- 17.1 The selected wall underlay and flexible sill and jamb tape system must be installed by the building contractor in accordance with the underlay and tape manufacturer's instructions prior to the installation of the cavity battens and the rest of the Caviteclad cladding system.
- 17.2 Where studs are at greater than 450 mm centres and a flexible wall underlay is being used, a wall underlay support must be installed over the underlay in accordance with NZBC Acceptable Solution E2/AS1.

#### Joinery Installation

- 17.3 Joinery must be installed in accordance with the appraised Technical Literature and any Technical Literature of the joinery manufacturer. The joinery must be installed plumb, level and fixed in accordance with NZBC Acceptable Solution E2/AS1 or the joinery manufacturer's Technical Literature.



### **Caviteclad**

- 17.4 The system must be installed in accordance with the Technical Literature by Specialized Construction Products certified plasterers.
- 17.5 The Caviteclad plaster system must only be applied when the air and substrate temperature is within the range of 5°C to 30°C.
- 17.6 The phenolic resin foam board has only been assessed for use with the Powaflex Mesh Coat. The EPS and XPS foam boards may be used with both the Coarse Mesh Coat and the Powaflex Mesh Coat.

### **Inspections**

- 17.7 The Technical Literature must be referred to during the inspection of Caviteclad installations.

### **Finishing**

- 17.8 The paint manufacturers' instructions must be followed at all times for application of the paint finish. The plaster must be cured for a minimum of 2-3 days and must be dry before commencing painting.

### **Health and Safety**

- 18.1 Protective equipment must be worn/used as required by the Technical Literature and manufacturer's instructions.

## **Basis of Appraisal**

The following is a summary of the technical investigations carried out:

### **Tests**

The following testing has been undertaken by BRANZ:

- 19.1 BRANZ expert opinion on NZBC Clause E2 code compliance for Caviteclad was based on testing and evaluation of all details within the scope and as stated within this Appraisal. Caviteclad was tested to NZBC Verification Method E2/VM1 as contained within NZBC Clause E2, Amendment 5, August 2011. The testing assessed the performance of the foundation detail, window head, jamb and sill details, meter box head, jamb and sill details, vertical and horizontal control joints, internal and external corners and balustrade to wall junction with a plastered cap. In addition to the weathertightness test, the details contained within the Technical Literature have been reviewed, and an opinion has been given by BRANZ technical experts that the system will meet the performance levels of NZBC Acceptable Solution E2/AS1 for drained cavity claddings.
- 19.2 Wind face load and fastener pull through testing was carried out for the Caviteclad system. BRANZ determined design wind suction pressures, and by comparing these pressures with the NZS 3604 design wind speeds and AS/NZS 1170 pressure coefficients, the fixing requirements were determined for timber and steel-framed walls.
- 19.3 Testing of tensile bond strength of the Caviteclad plaster system to the EPS, phenolic resin and XPS substrates was carried out in accordance with ASTM E2134-01.

### **Other Investigations**

- 20.1 Structural and durability opinions have been provided by BRANZ technical experts.
- 20.2 Site inspections of Caviteclad installations have been carried out by BRANZ to assess the practicability of installation, and to review in-service performance.
- 20.3 The Technical Literature for Caviteclad has been examined by BRANZ and found to be satisfactory.



## Quality

- 21.1 The manufacture of the plasters has been examined by BRANZ, including methods adopted for quality control. Details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory.
- 21.2 The manufacture of the Caviteclad sheets and Thermashell sheets has been examined by BRANZ, including methods adopted for quality control. Details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory.
- 21.3 The quality of materials, components and accessories supplied by Specialized Construction Products is the responsibility of Specialized Construction Products.
- 21.4 Quality on-site is the responsibility of the Specialized Construction Products certified plasterers.
- 21.5 Designers are responsible for the building design, and building contractors are responsible for the quality of installation of framing systems and joinery, building underlays, flashing tapes and air seals, in accordance with the instructions of Specialized Construction Products.
- 21.6 Building owners are responsible for the maintenance of Caviteclad installations in accordance with the instructions of Specialized Construction Products.

## Sources of Information

- AS 1366.1:1992 Rigid cellular plastics sheets for thermal insulation – Part 1: Rigid cellular polyurethane [RC/PUR].
- AS 1366.3:1992 Rigid cellular plastics sheets for thermal insulation – Part 3: Rigid cellular polystyrene – Moulded [RC/PS-M].
- AS 1366.4:1989 Rigid cellular plastics sheets for thermal insulation – Part 4: Rigid cellular polystyrene – Extruded [RC/PS-E].
- AS 3566:2002 Self-drilling screws for the building and construction industries.
- AS 3730 Guide to the properties of paints for buildings.
- AS/NZS 1170:2002 Structural design actions.
- AS/NZS 3837:1998 Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter.
- AS/NZS 4680:2006 Hot-dip galvanised [zinc] coatings on fabricated ferrous articles.
- ASTM E2134-01 Standard test method for evaluating the tensile-adhesive performance of an Exterior Insulation and Finish System [EIFS].
- NASH Building Envelope Solutions: 2019.
- NASH Standard Part Two: 2019 Light steel-framed buildings.
- NZS 3603:1993 Timber structures standard.
- NZS 3604:2011 Timber-framed buildings.
- NZS 4211:2008 Specification for performance of windows.
- NZS 4214:2006 Methods of determining the total thermal resistance of parts of buildings.
- Ministry of Business, Innovation and Employment Record of Amendments – Acceptable Solutions, Verification Methods and Handbooks.
- The Building Regulations 1992.



**BRANZ Appraised**  
Appraisal No. 510 [2026]

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Appraisal No. 510 [2026]  
16 June 2026

CAVITECLAD EXTERIOR  
INSULATION AND FINISHING  
SYSTEM



**BRANZ**

In the opinion of BRANZ, **Caviteclad Exterior Insulation and Finishing System** is fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided it is used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to **DuluxGroup [New Zealand] Pty Ltd t/a Specialized Construction Products**, and is valid until further notice, subject to the Conditions of Appraisal.

### Conditions of Appraisal

1. This Appraisal:
  - a) relates only to the product as described herein;
  - b) must be read, considered and used in full together with the Technical Literature;
  - c) does not address any Legislation, Regulations, Codes or Standards, not specifically named herein;
  - d) is copyright of BRANZ.
2. **DuluxGroup [New Zealand] Pty Ltd t/a Specialized Construction Products**:
  - a) continues to have the product reviewed by BRANZ;
  - b) shall notify BRANZ of any changes in product specification or quality assurance measures prior to the product being marketed;
  - c) abides by the BRANZ Appraisals Services Terms and Conditions;
  - d) warrants that the product and the manufacturing process for the product are maintained at or above the standards, levels and quality assessed and found satisfactory by BRANZ pursuant to BRANZ's Appraisal of the product.
3. BRANZ makes no representation or warranty as to:
  - a) the nature of individual examples of, batches of, or individual installations of the product, including methods and quality of work;
  - 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 **DuluxGroup [New Zealand] Pty Ltd t/a Specialized Construction Products**.
4. Any reference in this Appraisal to any other publication shall be read as a reference to the version of the publication specified in this Appraisal.
5. BRANZ provides no certification, guarantee, indemnity or warranty, to **DuluxGroup [New Zealand] Pty Ltd t/a Specialized Construction Products** or any third party.

For BRANZ

**Claire Falck**

Chief Executive

Date of Issue:

16 June 2026