



## BRANZ Appraised

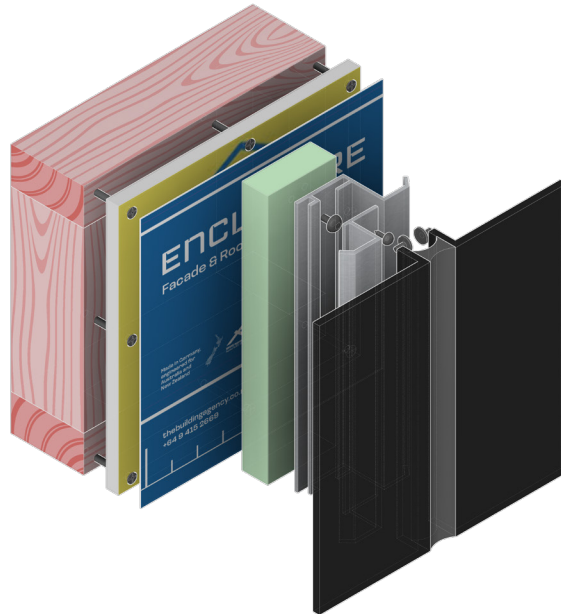
Appraisal No. 528 [2024]

## THE BUILDING AGENCY ALPOLIC™ CLADDING SYSTEM

### Appraisal No. 528 [2024]

This Appraisal replaces BRANZ  
Appraisal No. 528 [2017]

Amended 01 May 2026



### BRANZ Appraisals

Technical Assessments of  
products for building and  
construction.



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## Product

- 1.1 The Building Agency ALPOLIC™ Cladding System is a drained and ventilated external wall cladding. It is designed to be used as an external cladding system for residential and light commercial type buildings where domestic construction techniques are used. The system incorporates fabricated cladding panels manufactured from ALPOLIC™ fr.

## Scope

### Timber Framing

- 2.1 The Building Agency ALPOLIC™ Cladding System has been appraised for use as a drained and ventilated external wall cladding for timber-framed buildings within the following scope:
  - the scope limitations of NZBC Acceptable Solution E2/AS1, for timber-framed buildings; and,
  - constructed with timber framing complying with the NZBC; and,
  - subject to specific structural engineering; and,
  - with a risk score of 0-20, calculated in accordance with NZBC Acceptable Solution E2/AS1; and,
  - situated in NZS 3604 Wind Zones up to, and including, Extra High; and,
  - with a building height of ≤ 10 m; and,
  - where the cladding incorporates ALPOLIC™ fr panels, it is located 1 m or more from the relevant boundary (refer to Paragraphs 12.1 and 13.1-13.5); and,
  - where the cavity is drained and ventilated at least at every second-floor level or 10 m height, whichever is the lesser.

### Specific Design

- 2.2 The Building Agency ALPOLIC™ Cladding System 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; 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

- 2.3 The Building Agency ALPOLIC™ Cladding System must only be installed vertically over horizontal cavity battens, or horizontally over vertical cavity battens. In all instances, it must be installed on vertical, flat surfaces.
- 2.4 The Building Agency ALPOLIC™ Cladding System 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, The Building Agency ALPOLIC™ Cladding System, if designed, used, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet or contribute to meeting the following provisions of the NZBC:

**Clause B1 STRUCTURE:** Performance B1.3.1, B1.3.2 and B1.3.4. The Building Agency ALPOLIC™ Cladding System meets the requirements for loads arising from self-weight, earthquake, wind, impact and creep [i.e. B1.3.3 (a), (f), (h), (j) and (q)]. See Paragraph 8.1.

**Clause B2 DURABILITY:** Performance B2.3.1 (b) 15 years. The Building Agency ALPOLIC™ Cladding System meets this requirement. See Paragraphs 9.1-9.3.

**Clause C3 FIRE AFFECTING AREAS BEYOND THE FIRE SOURCE:** Performance C3.5 The Building Agency ALPOLIC™ Cladding System can contribute to meeting this requirement. See Paragraphs 12.1 and 13.1-13.5.

**Clause E2 EXTERNAL MOISTURE:** Performance E2.3.2. The Building Agency ALPOLIC™ Cladding System meets this requirement. See Paragraphs 13.1-13.6.

**Clause F2 HAZARDOUS BUILDING MATERIALS:** Performance F2.3.1. The Building Agency ALPOLIC™ Cladding System meets this requirement.

## Technical Specification

4.1 System components and accessories supplied by The Building Agency Limited are as follows:

### Cladding Panels

- Cladding panels are manufactured from ALPOLIC™ fr sheets by routing and folding to shape and size. Panels are reinforced by aluminium angles and stiffeners which are riveted or adhered to the panel. The Building Agency Limited should be contacted regarding the maximum sizes that may be achieved by panels. Panels are attached to the structure through aluminium fixing brackets. They are available in a variety of colours.

### ALPOLIC™ fr

- ALPOLIC™ fr is an aluminium composite material (ACM) with 3 mm mineral core, sandwiched between two skins of 0.5 mm thick aluminium metal facings, having a total nominal thickness of 4 mm. The topside surface is finished with Lumiflon based fluoropolymer coating as standard, and the backside is finished with a thin polyester coating (wash coating) or service coating. Finishes are available in Solid, Metallic, Sparkling, Prismatic colours and patterns. Panels are available in widths 914 to 1,620 mm and lengths 1,800 to 7,200 mm.

### A&B Anchoring System

- Aluminium rails and angle fixing brackets.

### Accessories

- Aluminium Base Extrusions and Midspan Stiffeners- various profiles to suit different scenarios.
- Screws and rivets for panel fixing.
- Plastic packers.

4.2 Accessories used with The Building Agency ALPOLIC™ Cladding System that are supplied by others are:

- **ENCLOSURE™ Facade & Roofing Membrane** - a self-adhesive wall underlay for application over rigid wall underlays.
- **ENCLOSURE™ Flash - N - Seal** - a self-adhesive flashing tape for separating treated cavity batten from aluminium components.
- **PEF backing rod.**
- **Sikaflex® AT-Façade** - refer BRANZ Appraisal No. 613.



- **Sikasil® WS-305 CN** - this has not been assessed by BRANZ and it outside the scope of this Appraisal.
- **Dow Corning 688** - this has not been assessed by BRANZ and it outside the scope of this Appraisal.
- **Sikaflex® 552 AT** - this has not been assessed by BRANZ and it outside the scope of this Appraisal.
- **Rigid Wall Underlay** - a suitable rigid wall underlay suitable for use in the relevant wind pressure for the building design. [Note: These have not been assessed by BRANZ and are outside the scope of this Appraisal.]

## Handling and Storage

- 5.1 Handling of the aluminium and aluminium composite panels and the associated accessories must be in accordance with The Building Agency ALPOLIC™ Cladding System Technical Literature and The Building Agency Limited's instructions.

## Technical Literature

- 6.1 This Appraisal must be read in conjunction with:
- ALPOLIC™ fr, Timber Frame, A & B Anchoring Systems, Revision A, dated 24/04/2026.
- 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

### Framing

#### Timber Treatment

- 7.1 Timber framing must be treated as required by NZBC Acceptable Solution B2/AS1.
- 7.2 All aluminium components of The Building Agency ALPOLIC™ Cladding System must be separated from contact with treated timber that contains copper [e.g. CCA, copper azole or ACQ].

#### Timber Framing

- 7.3 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. In all cases, studs must be at maximum 600 mm centres.
- 7.4 Timber framing must have a maximum moisture content of 24% at the time of the cladding system application. [Note: If the cladding system is installed to framing with a moisture content of greater than 24%, problems may occur at a later date due to excessive timber shrinkage.]

### General

- 8.1 Ground clearance to finished floor levels as set out in NZS 3604 must always be adhered to.
- 8.2 The bottom of cladding must have separations, clearances and overlaps in accordance with NZBC Acceptable Solution E2/AS1.
- 8.3 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.
- 8.4 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.
- 8.5 Where The Building Agency ALPOLIC™ Cladding System abuts other cladding systems, the designer must detail the junction to meet their own requirements and the performance requirements of the NZBC. These details are outside the scope of this Appraisal.

## Structure

### Structural Design

9.1 The design of the cladding is subject to specific structural engineering.

### Impact Resistance

9.2 The Building Agency ALPOLIC™ Cladding System has good resistance to hard and soft body impacts 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.

## Durability

### Serviceable Life

10.1 When installed and maintained in accordance with the specifications and installation instructions as defined in the Technical Literature, The Building Agency ALPOLIC™ Cladding System, incorporating ALPOLIC™ fr panels has an expected serviceable life of greater than 15 years, refer to Table 1.

**Table 1: Expected Serviceable Life of Maintained The Building Agency ALPOLIC™ Cladding System in New Zealand.**

Panel System	NZS 3604 Exposure Zone		
	Zone B	Zone C	Zone D <sup>1,4</sup>
ALPOLIC™ fr	>15 Years	>15 Years	15 Years <sup>2,3</sup>

Notes:

- Zone D covers coastal areas with high risk of wind-blown sea-spray salt deposits. In NZS 3604, this zone is defined as within 500 m of the sea including harbours, or 100 m from tidal estuaries and sheltered inlets, and all offshore islands. However, beach front regions subject to rough seas and surf beaches may exhibit a higher corrosivity and can be defined as atmospheric corrosivity category E of AS/NZS 2728 and C5 of ISO 9223. In NZS 3604, corrosion protection in Zones D and E are identical and Zone E is not shown in the exposure zone map.*
  - Maintenance is essential. This may include regular washing using water or mild detergent to remove any dirt or salt particle accumulation or deposition on the panel surface. This is particularly important for those areas where any rain washing effects are limited.*
  - The durability of the FEVE based coatings only is likely to be greater than 10 years in this exposure zone. However, the combined durability of the surface coating and the underlying aluminium sheet is likely to exceed 15 years in this severe marine environment.*
  - In industrially or agriculturally contaminated atmospheres, corrosive environments and geothermal hot spots, specific design is required.*
- 10.2 Significant acceleration of corrosion can occur due to industrial contamination and corrosive atmospheres and contamination from agricultural chemicals or fertilisers. Specific design is required under these microclimatic conditions.
- 10.3 Some dark colours of coatings may experience some fading after prolonged ultraviolet (UV) exposure.
- 10.4 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. The use of the The Building Agency ALPOLIC™ Cladding System in areas subject to microclimatic conditions requires specific design in accordance with NZS 3604 and is outside the scope of this Appraisal.

## Maintenance

- 11.1 Regular maintenance is essential for The Building Agency ALPOLIC™ Cladding System installations to maximise the serviceable life of the system.
- 11.2 Annual inspections must be made to ensure that all aspects of the cladding system, including flashings and any joints remain in a weathertight condition. Any damaged areas or areas showing signs of deterioration which would allow water ingress, must be repaired immediately. Regular cleaning [every 6 months] of the powder-coating with water and a mild detergent is required to remove grime, dirt and organic growth and to maximise the life and appearance of the cladding. Repainting of the powder-coating may be considered necessary at some stage during the serviceable life of the system to restore the appearance of the cladding. Repainting must be carried out in accordance with the paint manufacturer's instructions.

## Prevention of Fire Occurring

- 12.1 Separation or protection must be provided to The Building Agency ALPOLIC™ 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 External Fire Spread

- 13.1 Refer to NZBC Acceptable Solutions and Verification Method C/AS1, C/AS2 and 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 Building Agency ALPOLIC™ 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 Building Agency ALPOLIC™ Cladding System has not been assessed for use where these requirements apply.

## External Moisture

- 14.1 The design of The Building Agency ALPOLIC™ Cladding System is subject to the following restrictions:
  - A building with wind exposure of less than 1.1 kPa ULS must have a building wrap complying with NZBC Acceptable Solution E2/AS1, or a rigid air barrier.
  - A building with exposure to wind above 1.1 kPa ULS must have building wrap or a rigid air barrier that has an airflow resistance of greater than 0.1 MNs/m<sup>3</sup>.
  - A building with exposure to wind on any part of its façade above 1.55 kPa ULS must use a rigid air barrier as the backing for the cavity.
- 14.2 The Building Agency ALPOLIC™ Cladding System, when installed in accordance with this Appraisal and the Technical Literature, prevents the penetration of moisture that could cause undue dampness or damage to building elements.
- 14.3 The drained cavity must be sealed off to restrict air movement between the drained cavity; and: floor, wall and roof framing, and attic roof space, and subfloor space as required by NZBC Acceptable Solution E2/AS1.



- 14.4 The Building Agency ALPOLIC™ Cladding System allows excess moisture present at the completion of construction to be dissipated without permanent damage to building elements to meet code compliance with NZBC Clause E2.3.6.
- 14.5 The details given in the Technical Literature for weather sealing are based on the design principle of a drained and ventilated cladding to prevent moisture entry for all joints, penetrations and junctions. 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.
- 14.6 The use of The Building Agency ALPOLIC™ Cladding System where there is a designed cavity drainage path for moisture that penetrates the cladding, does not reduce the requirement for junctions and penetrations to remain weather resistant.

## Installation Information

### Installation Skill Level Requirement

- 15.1 Installation and finishing of components and accessories supplied by The Building Agency Limited must always be carried out in accordance with The Building Agency ALPOLIC™ Cladding System Technical Literature and this Appraisal by trained installers, approved by The Building Agency Limited.

### Inspections

- 16.1 For inspection, reference must be made to the specific building design documentation and The Building Agency Limited's installation information.

## Basis of Appraisal

### Tests

- 17.1 The Building Agency ALPOLIC™ Cladding System has been tested to NZBC Verification Method E2/VM1.

### Other Investigations

- 18.1 The Technical Literature for The Building Agency ALPOLIC™ Cladding System has been reviewed by BRANZ and found to be satisfactory.
- 18.2 Site inspections have been carried out to assess the practicability of installation, and to examine completed installations.
- 18.3 Opinions on weathertightness and durability aspects were given by BRANZ technical experts.

### Quality

- 19.1 The manufacture of the ALPOLIC™ fr has not been examined by BRANZ, but the quality control systems of Mitsubishi Chemical Infratec Co., Ltd have been assessed and registered as meeting the requirements of ISO 9001.
- 19.2 The Building Agency Limited is responsible for the quality of product supplied.
- 19.3 Quality of panel installation on-site is the responsibility of The Building Agency Limited.
- 19.4 Designers are responsible for the building design, including structural design of the panels and fixings, and weathertightness design of penetrations.
- 19.5 Building owners are responsible for the maintenance of The Building Agency ALPOLIC™ Cladding System in accordance with the instructions of The Building Agency Limited.



## Sources of Information

- AS/NZS 1170:2011 Structural design actions.
- AS/NZS 2728:2013 Prefinished/prepainted sheet metal products for interior/exterior building applications - Performance requirements.
- NZS 3604:2011 Timber-framed buildings.
- ISO 5660.1: 2002 Heat release rate [cone calorimeter method].
- ISO 9223:2012 Corrosion of metals and alloys - Corrosivity of atmospheres - Classification, determination and estimation.
- Ministry of Business, Innovation and Employment Record of amendments - Acceptable Solutions, Verification Methods and handbooks.
- The Building Regulations 1992.

## Amendments

### Amendment No. 1, dated 24 April 2024

This Appraisal has been amended to clarify the NZBC Acceptable Solution E2/AS1 scope in Paragraph 13.1.

### Amendment No.2, dated 01 May 2026

This Appraisal has been amended to update the Appraisal Name, Technical Literature, the Technical Specification section and to reflect changes made to the NZBC compliance documentation.



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Appraisal No. 528 (2024)  
17 April 2024

THE BUILDING AGENCY  
ALPOLIC™ CLADDING SYSTEM



In the opinion of BRANZ, **The Building Agency ALPOLIC™ Cladding 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 **The Building Agency Limited**, 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. **The Building Agency Limited:**
  - 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 **The Building Agency Limited**.
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 **The Building Agency Limited** or any third party.

For BRANZ

**Claire Falck**  
Chief Executive  
Date of Issue:  
17 April 2024