



## BRANZ Appraised

Appraisal No. 601 [2020]

## PANORAMA PVC LINING SYSTEM

### Appraisal No. 601 [2020]

This Appraisal replaces BRANZ Appraisal No. 601 [2014]



### BRANZ Appraisals

Technical Assessments of products for building and construction.



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## Product

- 1.1 The Panorama PVC Lining System consists of white extruded PVC hollow panels used as exterior soffit linings, and interior wall and ceiling linings. The Panorama PVC panels are extruded with a tongue and groove profile that when fitted together, resembles the finished look of tongue and groove painted timber panelling.

## Scope

- 2.1 The Panorama PVC Lining System has been appraised for use as an external soffit lining for buildings situated in NZS 3604 Wind Zones up to and including Very High for timber framing and High for steel framing.
- 2.2 The Panorama PVC Lining System has also been appraised for use as interior wall and ceiling linings.

## Building Regulations

- 3.1 In the opinion of BRANZ, the Panorama PVC Lining 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. The Panorama PVC Lining System meets the requirements of loads arising from self weight, wind, and impact [i.e. B1 3.3 (a), (h), (j)]. See Paragraph 9.1.

**Clause B2 DURABILITY:** Performance B2.3.1 [b] 15 years for soffit linings and B2.3.1 [c], 5 years for interior wall and ceiling linings. The Panorama PVC Lining System meets these requirements. See Paragraph 10.1.

**Clause E2 EXTERNAL MOISTURE:** Performance E2.3.2. The Panorama PVC Lining System meets this requirement. See Paragraph 15.1.

**Clause F2 HAZARDOUS BUILDING MATERIALS:** Performance F2.3.1. The Panorama PVC Lining System meets this requirement and will not present a health hazard to people.

## Technical Specification

4.1 The Panorama PVC Lining System consists of white extruded PVC panels and trims. The panels are hollow profiled 10 mm thick and either 100 mm, 150 mm or 200 mm wide with inter-locking joints. The wider 150 mm and 200 mm panels are for internal wall and ceiling lining only. The 100 mm panels are also suitable for external soffit lining. The profile represents tongue and groove timber panelling. The panels are supplied in lengths of either 4 m or 5.8 m. The surface of the PVC elements is pre-finished at extrusion and does not require further finishing or painting. The trims include end closers, straight jointers, variable angle jointers, and external corners.

**Table 1. Panel Fixings**

	<b>Timber Framing</b>	<b>Steel Framing</b>
<b>For Soffit Use</b>	32 mm x 6 g stainless steel screws with minimum head diameter of 8.3 mm	20 mm x 8 g galvanised* self-tapping pan head screws with minimum head diameter of 7.6 mm
<b>For Interior Lining Use</b>	25 mm x 6 g drywall screws	25 mm x 6 g self tapping drywall screws

\* In accordance with Table 4.3 of NZS 3604

## Handling and Storage

5.1 There are minimum handling and storage requirements for the constituent components of the Panorama PVC Lining System. PVC material should be stored away from organic solvents, or tar based products as these can stain the PVC material. Elements of the system are best kept wrapped until they are required for installation.

## Technical Literature

6.1 Refer to the Appraisals listings on the BRANZ website for details of the current Technical Literature for the Panorama PVC Lining System. The Technical Literature must be read in conjunction with this Appraisal. All aspects of use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

## Design Information

### Framing

#### Timber Framing

- 7.1 Timber framing grade, spacing, and construction must comply with NZS 3604. Timber treatment must comply with NZBC Acceptable Solution B2/AS1.
- Supporting framing for soffits must be at a maximum of 600 mm centres for NZS 3604 Wind Zones up to and including High and at a maximum of 450 mm centres for the Very High Wind Zone.
  - For ceilings, supports must be at a maximum of 600 mm centres.
  - For interior wall linings, studs must be at a maximum of 600 mm centres for horizontally fixed panels, and dwangs must be at a maximum of 600 mm centres for vertically fixed panels.
- 7.2 Timber wall framing must have a maximum moisture content of 24% at the time of the lining application.

### Steel Framing

- 7.3 The Panorama PVC Lining System can also be fixed to steel support framing using galvanised self-tapping screws. Folded galvanised steel profile for framing must not be less than 0.55 mm thick.
- Supporting framing for soffits must be at a maximum of 600 mm centres for NZS 3604 Wind Zones Medium and Low and a maximum of 450 mm centres for the High Wind Zone. The Panorama PVC Lining System cannot be fixed to steel framing for soffits in the Very High Wind Zone.
  - For ceilings, supports must be at a maximum of 600 mm centres.
  - For interior wall linings, studs must be at a maximum of 600 mm centres for horizontally fixed panels, and dwangs must be at a maximum of 600 mm centres for vertically fixed panels.

### General

- 8.1 Additional framing may be required when preparing soffits for lining with the Panorama PVC Lining System.
- 8.2 The Panorama PVC Lining System does not perform the function of an air-barrier. When used as an internal lining on an external wall, a separate air barrier must be used. Refer to NZBC Acceptable Solution E2/AS1 Paragraph 9.1.4.

### Structure

#### Wind Zones

- 9.1 The Panorama PVC Lining System, when used as a soffit, is suitable for use on buildings in NZS 3604 Wind Zones up to and including Very High when fixed to timber framing, and up to and including High when fixed to steel framing. [See Paragraphs 7.1 and 7.3.]

### Durability

#### Serviceable Life

- 10.1 The Panorama PVC Lining System whether installed as a soffit or as an interior lining on ceilings or walls, can be expected to have a serviceable life of 15 to 25 years.

### Maintenance

- 11.1 Regular cleaning (at least annually) of the Panorama PVC Lining System surface is recommended to remove grime, dirt and organic growth, and to maximize the life and appearance of the surface finish. Build-up of residue, mould or dirt can be removed by brushing with a soft brush, warm water and detergent. Abrasive cleaners, thinners, solvents or petrol must not be used to clean the Panorama PVC Lining System.

### Prevention of Fire Occurring

- 12.1 Separation or protection must be provided to the Panorama PVC Lining System from heat sources such as fireplaces, heating appliances and chimneys. Part 7 of NZBC Acceptable Solution C/AS1 and C/AS2, and NZBC Verification Method C/VM1 provide methods for separation and protection of combustible materials from heat sources.

### Fire Affecting Areas Beyond the Fire Source

#### Control of Internal Fire and Smoke Spread

- 13.1 The Panorama PVC Lining System has been tested in accordance with ISO 5660 and achieved a Group Number of 1. Refer to Table 4.1 of NZBC Acceptable Solution C/AS2 to determine where the Panorama PVC Lining may be used according to its Group Number.

#### Vertical Fire Spread

- 13.2 This Appraisal only covers use as an external soffit lining on 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 the Panorama PVC Lining System is used as the soffit lining to eaves, verandas, canopies or other such structures outside the envelope of the building, there is no requirement for the control of external fire spread where the soffit is more than 650 mm from a relevant boundary and the soffit is not part of an exitway.

### **External Moisture**

- 14.1 The Panorama PVC Lining System, when installed in accordance with this Appraisal and the Technical Literature will prevent the penetration of moisture that could cause undue dampness or damage to building elements.

## **Installation Information**

### **Installation Skill Level Requirements**

- 15.1 All design and building work must be carried out in accordance with the Panorama PVC Lining System Technical Literature and this Appraisal by competent and experienced tradespersons conversant with the Panorama PVC Lining System. 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 License class.

### **System Installation**

- 16.1 PVC components may be cut on site by hand saw or power tools with a fine toothed-blade.
- 16.2 A 3 mm gap must be left at panel ends to allow for movement.
- 16.3 Panels are fixed at every support by screws through the tongue. The next panel covers the screw from sight. Refer to Table 1 for screw fixings.
- 16.4 For soffit installations the Panorama PVC Lining System trims must be appropriately sealed at fascia and barge boards.

### **Health and Safety**

- 17.1 There are no special Health and Safety issues, though care should be taken when cutting PVC components.

## **Basis of Appraisal**

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

### **Tests**

- 18.1 Wind suction tests were conducted by BRANZ to demonstrate the required soffit fixing and soffit lining pull-off strength for both steel and timber framing for Wind Zones of NZS 3604.

### **Other Investigations**

- 19.1 Structural and durability opinions have been provided by BRANZ technical experts.
- 19.2 Site inspections have been carried out by BRANZ to assess the practicability of installation and to examine completed installations.

### Quality

- 20.1 The manufacture of the Panorama PVC Lining System has not been examined by BRANZ, but details of the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory.
- 20.2 Quality of materials, components, and accessories supplied by Ampelite [NZ] Limited is the responsibility of Ampelite [NZ] Limited.
- 20.3 The quality of installation on site is the responsibility of the installer.
- 20.4 Designers are responsible for the building design, and building contractors are responsible for the quality of installation.
- 20.5 Building owners are responsible for the maintenance of the Panorama PVC Lining System in accordance with the advice of Ampelite [NZ] Ltd.

### Sources of Information

- ISO 5660-1:2002 Reaction-to-fire tests - Heat release, smoke production and mass loss rate - Heat release rate [cone calorimeter method]
- NZS 3602: 2003 Timber and wood based products for use in building.
- NZS 3604: 2011 Timber-framed buildings.
- Ministry of Business, Innovation and Employment Record of amendments - Acceptable Solutions, Verification Methods and handbooks.
- The Building Regulations 1992.





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4 May 2020

PANORAMA PVC LINING SYSTEM



In the opinion of BRANZ, **Panorama PVC Lining 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 **Pacific Plastic et Profile SARL**, 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. **Pacific Plastic et Profile SARL**
  - 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 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 **Pacific Plastic et Profile SARL**.
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 **Pacific Plastic et Profile SARL** or any third party.

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For BRANZ

**Chelydra Percy**

Chief Executive

Date of Issue:

04 May 2020