Product Technical Statement

PaneLux® A1

Solid Aluminium Cladding System

Version: V2 – 122025
Version Date: 17/12/2025

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This Product Technical Statement does not constitute a site-specific design or certification of compliance. Suitability for use must be confirmed by the project designer and consent authority based on the specific building design, location, and conditions.

Uncontrolled in printed format.

Product Technical Statement

This Product Technical Statement has been produced with the understanding that the product will be utilised in accordance with the manufacturer's details in the application described below.

Type and/or use of product: PaneLux® A1 Solid Aluminium Cladding System is a drained and ventilated external wall cladding solution**.** It is intended for use in residential and commercial buildings.

This system consists of 3 mm solid aluminium façade sheets fabricated into cassette panels and installed over a drained and ventilated cavity using the PaneLux LAB System or other proprietary cassette façade systems that meet the project performance requirements. The system provides an external cladding solution that supports façade ventilation and moisture management behind the cladding while providing a durable aluminium architectural finish. Final system design including fixing configuration, structural support, and load transfer to the primary building structure remains the responsibility of the project designer and structural engineer.

Description of product: PaneLux® A1 is a 3 mm thick solid aluminium panel prefinished with a three coat fluorocarbon PVDF system applied using a continuous coil coating process. The rear aluminium sheet face has a mill finish or polyester-based service coat. Product identification including the product name, colour and production date can be located on the rear of the panel.

PaneLux® A1 panels are non-structural façade panels and must be supported by a compliant subframe or carrier system designed to transfer all structural loads to the primary building structure.

PaneLux® A1 panels are manufactured from solid aluminium and contain no composite or polymer core.

General dimensions: Thickness (mm): 3, Length (mm): 3200 & 4000 (standard), up to 6000 (indent) Width (mm): 1550 (standard), 1250 (indent). Weight 8.1 kg/m2.

Typical product installation:

- LAB Extrusion System.

Note: PaneLux® A1 Panel can be fabricated and fixed using the LAB Extrusion System to the product installation guides and supplementary details.

PaneLux® A1 Panel may also be used in conjunction with other proprietary cassettes systems that meet the project's performance matrix. Refer Knack Engineering Report no MUL-002 Dated 17/12/2025.
Mulford New Zealand does not warrant or certify third-party cassette or fixing systems. Assessment of equivalence and compliance of alternative systems remains the responsibility of the project engineer and consent authority

Supporting information: When specifying or installing any of Mulford New Zealand products/systems, please ensure that you have all the current literature.

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Conditions and limitations of use: Intended for use as a drained and ventilated external wall cladding system for buildings that fall within the following parameters:

- In accordance with NZS 3604:2011 for timber-framed buildings; or
- In accordance with NZS 3404:2009 Part 1 and the NASH Standard Part 2: May 2019 for light steel-framed buildings.
- Or by specific engineering design (SED) in accordance with B1/VM1 Amendment 21 (2 November 2023), prepared by a suitably qualified chartered professional engineer.
- Inter-storey drained joints must be installed to limit continuous cavities to a maximum of two storeys or 7 metres in height, whichever is less, as required by NZBC Acceptable Solution E2/AS1.
- The PaneLux® A1 Solid Aluminium Cladding System is suitable for use within the scope limitations defined in NZBC Acceptable Solution E2/AS1, Third Edition, Amendment 10 (dated 5 November 2020), Paragraph 1.1. It is appropriate for buildings with a risk score of up to 20, as calculated in accordance with Table 2 of E2/AS1, that the cladding system has been assessed for use in all Wind Zones up to and including Extra High, as defined in NZS 3604:2011, subject to the following conditions:
  I. In Extra High Wind Zones, a rigid air barrier must be installed.
  II. In Wind Zones lower than Extra High, either a flexible building wrap or a rigid air barrier may be used.
- In all exposure zones, as defined in NZS 3604:2011. In areas identified as having adverse microclimates (see NZS 3604:2011, Section 4.2.4), Contact Our Expert Team - Mulford New Zealand
- Use of non-combustible packers is mandatory for walls positioned within 1 metre of the applicable boundary.
- On buildings up to and including 25 m in height, the PaneLux LAB Extrusion System may be used. Alternative carrier systems must be supported by project specific engineering design and confirmed as suitable by the project engineer.
- The PaneLux® A1 Solid Aluminium Cladding System must be specified, installed, and maintained in accordance with the following documents, collectively referred to as the applicable PaneLux ®A1 Solid Aluminium Cladding System Technical Literature:
  - PaneLux®A1 Solid Aluminium Cladding System Product Technical Statement V2 122025.
  - PaneLux® A1 Solid Aluminium Cladding System BPIR Version V1.1 April 2026.
  - PaneLux® A1 Solid Aluminium Cladding System Specification + Guide V1.1 042026.
  - PaneLux® A1 Solid Aluminium Cladding System Design Guide V1.1 042026.
  - PaneLux® A1 Solid Aluminium LAB System Typical Details 25th July 2025
  - PaneLux® A1 Solid Aluminium Cladding System Cleaning and Maintenance Guide V1.1 042026.
  - PaneLux® A1 Solid Aluminium Panel Processing and Technical Data Guide V1.1 March 2026.
  - PaneLux® A1 Solid Aluminium Panel – Visual Specification and Quality Plan V1.1 032026.

The installer must provide a signed declaration confirming that the product has been installed in accordance with the conditions specified in this PTS, for consideration in the issuance of the Code Compliance Certificate (CCC).

This Product Technical Statement does not assess structural adequacy of the supporting structure, acoustic performance, cover thermal performance unless specially designed or override fire engineer determinations.

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Building Regulations - New Zealand Building Code (NZBC) When designed, installed, and maintained in accordance with all requirements set by Mulford New Zealand, the PaneLux® A1 Solid Aluminium Cladding System will support compliance with the following performance criteria.

Clause B1 STRUCTURE: Performance B1.3.1, B1.3.2, B1.3.3(a, h) – alternative solution

- The PaneLux® A1 Solid Aluminium Cladding System tested in accordance with AS/NZS4284:2008 "Testing of Building Facades" with a SLS 2.5kPa with a ULS of 3.7kPa – refer Facadelab test report 23-02 dated 24th July 2023*
- PaneLux® A1 Panel technical properties – Yield Strength 122Mpa – Tensile Strength 146Mpa – Feiteng -Product Data Sheet.

Clause B2 DURABILITY: Performance B2.3.1(b) – acceptable solution - B2/AS1

- When installed and maintained in accordance with the specifications and instructions outlined in the PaneLux® A1 Cleaning & Maintenance Guide version V1.1-042026, the PaneLux® A1 Panel is expected to have a serviceable life exceeding 15 years.

Clause C3 FIRE AFFECTING AREAS BEYOND THE FIRE SOURCE - Performance C3.4(a), C3.7(a) acceptable solution - C/AS1 and C/AS2

- PaneLux® material tested in accordance to AS/NZS1530.1-1994 Part 1 and deemed noncombustible – refer Ignis Labs Test Report IGNL-9397-01-01C I01 R00 dated 10th October 2025.
- PaneLux® material tested in accordance to EN13501-1:2007 (ISO9705-1:2016) and classified as Class A1- refer SGS Test Report AJFS2007005644FF dated 31st July 2020.
- PaneLux® A1 material tested in accordance to ISO5660-1:2002 (used as supporting evidence for NZBC C/AS2 Appendix C C7.1 Type A & B) -refer BRANZ Test Report FH13948-001 Issue 1 dated 8th July 2021.

Clause E2 EXTERNAL MOISTURE – Performance – E2.3.2, E2.3.5, E2.3.7 – alternative solution

- PaneLux® A1 Solid Aluminium Panel fixed to the LAB Extrusion System tested in accordance with AS/NZS4284:2008 "Testing of Building Facades" – refer Facadelab test report 23-02 dated 24th July 2023*

  PaneLux® A1 Panel may also be used in conjunction with other proprietary cassettes systems that meet the project's performance matrix. Refer Knack Engineering Report no MUL-002 Dated 17/12/2025.

Clause F2 HAZARDOUS BUILDING MATERIALS – F2.3.1 – alternative solution

- The aluminium substrate is inert, and the coating system is inert after drying.

Sources of information

- AS/NZS 2728:2013 – Prefinished/pre-painted sheet metal products for interior and exterior building applications – Performance requirements.
- AS/NZS 4284:2008 – Testing of building façades.
- NZS 3604:2011 – Timber-framed buildings.
- ISO 9223:2012 – Corrosion of metals and alloys – Corrosivity of atmospheres.
- AS/NZS1170:2011 Structural design actions.

* The AS/NZS 4284 façade test represents a full scale performance assessment of the cladding assembly and provides supporting evidence of system performance when used in accordance with the PaneLux A1 technical documentation and project specific engineering design.