Product Technical Statement

PaneLux® A1

Solid Aluminium

Cladding System

Version Details: 10072025
Version: V1 – 072025
Version Date: 10/07/2025

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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 specifically engineered for use in residential and commercial buildings.

This system provides a durable, aesthetically refined exterior finish, while supporting the necessary airflow and moisture management behind the cladding for long-term building performance.

Description of product: PaneLux® A1 is a 3 mm thick solid aluminium panel, pre-finished which is coil coated using an in-line, 3-coat fluorocarbon PVDF system. 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.

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 propriety cassettes systems that meet the projects performance matrix. PaneLux® material tested in accordance to EN13501-1:2007 (reaction to fire) and classified as Class A1.

Supporting Information: When specifying or installing any of Mulford New Zealand products/systems, please ensure that you have all the current literature. If you're not sure or need more information, Contact Our Expert Team - Mulford New Zealand

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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 is compliant 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 with building height ≤ 10m, the LAB Extrusion System or Hook and Pin may be used.
- On buildings building height ≥ 10 m and ≥25 m, the LAB Extrusion System must be used.

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 V1 – 072025.
- PaneLux® A1 Solid Aluminium Cladding System BPIR Version V1 - 2024.
- PaneLux® A1 Solid Aluminium Cladding System Specification + Guide V1 – 072025.
- PaneLux® A1 Solid Aluminium Cladding System Design Guide V1 – 072025.
- PaneLux® A1 Solid Aluminium LAB System Typical Details 25th July 2025
- PaneLux® A1 Solid Aluminium Cladding System Cleaning and Maintenance Guide V1-072025.
- PaneLux® A1 Solid Aluminium Panel Processing and Technical Data Guide.
- PaneLux® A1 Solid Aluminium Panel – Visual Specification and Quality Plan V1 -072025

The PaneLux® A1 Solid Aluminium Cladding System must be installed by a Mulford New Zealand approved building professional, in accordance with the relevant PaneLux® A1 technical literature or project specific design.

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).

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Mulford New Zealand confirms that this product is not subject to any warning or ban under Section 26 of the Building Act and will provide product information required under Section 14G (3) of the Building Act. This Product Technical Statement may only be reproduced in its entiretv. Uncontrolled in printed format.

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 meet or 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 V1-052024, 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 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 (Satisfying 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/NZS4285:2008 "Testing of Building Facades" – refer Facadelab test report 23-02 dated 24th July 2023.

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 5660-1:2002 – Reaction-to-fire tests – Heat release rate using the cone calorimeter method.
- ISO 9223:2012 – Corrosion of metals and alloys – Corrosivity of atmospheres – Classification, determination, and estimation.
- AS/NZS1170:2011 Structural design actions.
- EN13501-1:2007 Classifying the reaction to fire of construction products.