

Visual Specification Quality Plan

PaneLux® A1 Solid Aluminium Cladding System

Version: V1.1 - 032026

Version Date: 30/03/2026



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1. Purpose:

To define visual inspection procedures and acceptance criteria for the surface quality and appearance of PaneLux® A1 solid aluminium panels in accordance with AAMA 2605 coating performance requirements.

2. Scope:

The attributes contained in this document are applicable for PaneLux® A1 Solid Aluminium Panels that are used in exterior architectural applications that are either manufactured or supplied by Mulford New Zealand and Australia.

3. Responsibilities:

- Quality Control Inspector: Conduct visual inspection of panels.
- Production Team: Ensure panels are properly prepared for inspection.

4. Visual inspection conditions:

- Normal lighting.
- Viewing distance.
- Inspection angle approximately 90 degrees to the panel surface.

5. Equipment and materials:

- Inspection Area: Well lit, clean, and a flat surface is recommended.
- Visual Inspection Checklist: AAMA 2605 standard.

6. Visual Inspection and criteria for surface quality:

Visual inspection of PaneLux® A1 solid aluminium panels involves assessing the visibility and depth of surface imperfections such as flakes, blisters, dents, cracks, waviness, or other surface irregularities in the coated finish.

Minor surface variations may be considered acceptable provided they do not affect the structural integrity or overall visual appearance of the panel system when inspected under the defined inspection conditions.

- **Normal Lighting** - Inspections should be performed under normal lighting conditions, avoiding direct sunlight or harsh shadows.
- **Viewing Distance** - Inspections should be conducted from a minimum distance of 3 metres from the panel surface at approximately 90 degrees to the panel, under diffuse natural daylight. Low-angle or raking sunlight that exaggerates surface variation should be avoided.
- **Focus on Function and Aesthetics** - The primary goal is to ensure the panel's structural integrity and maintain an acceptable aesthetic appearance.
- **Timing of Inspection**

Visual acceptance inspection should be carried out at practical completion, prior to significant weathering, environmental soiling, or operational contamination, and before handover to the building owner. Assessment after extended exposure or in the absence of routine maintenance may not be representative of manufacturing or supply condition.

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7. Surface quality:

a) Smoothness and Uniformity

Panels should have a smooth and even surface without any noticeable bumps, scratches or colour variations. The visual appearance of colours can vary for a variety of reasons, including batch to batch colour variations, grain directionality of metallic or mica-based coatings.

b) Defect Check

Look for any irregularities, such as roughness, buckling or other imperfections.

c) Dents

For visual inspection of dents in PaneLux® A1 Solid Aluminium Panels, acceptance criteria typically involve assessing the depth and visibility of dents. Minor surface variations may be acceptable where they do not materially affect the visual appearance of the façade when inspected under the defined inspection conditions. Minor surface marks or dents that occur during transportation, storage, fabrication, or installation are not considered manufacturing defects and should be assessed prior to installation.

d) Waviness & continuous mechanical Impression

Minor surface waviness or mechanical impressions may occur due to coil coating or fabrication processes. Panels shall be assessed under the defined viewing conditions to determine whether the variation is visually noticeable.

e) Edge Waviness

Minor edge waviness may occur because of coil coating and fabrication processes. Edge wave up to approximately 25 mm from the panel edge may be present provided it is not visually noticeable when inspected in accordance with the defined viewing conditions.

f) Colour Consistency

Ensure the colour of the panels is consistent across the entire surface and matches the project specifications. The visual appearance of colours can vary for a variety of reasons, including batch to batch colour variations, grain directionality of metallic or mica-based coatings. Minor colour variation between production batches may occur. To achieve the most consistent appearance, panels for a continuous façade elevation should be supplied from the same production batch and installed in the same orientation where practicable.

g) Finish Performance

Assess the quality of the surface coating or finish, ensuring it's free from peeling, blistering, cracking, or chalking under normal weather conditions.

Surface changes arising from environmental exposure, atmospheric contamination, salt deposition, pollution, or lack of routine cleaning and maintenance are not considered manufacturing defects and shall be assessed in accordance with the PaneLux® A1 Cleaning and Maintenance Guide.