



Nu-Wall Finishes and Colours Guide

November 2021



Architecturally inspired. Performance proven

Introduction

Nu-Wall® extruded aluminium weather boards are available in a wide range of colours and surface options.

Our manufacturing partner is McKechnie Aluminium in New Plymouth who have pioneered aluminium extrusion in New Zealand since 1871.

McKechnie also have anodising and powder coating facilities, which means Nu-Wall® products can be completed in one location.

This document will explore the various finishes and discuss the features, natural attributes and advantages of each finish.

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One page summary

The 3 main finishes we offer are:

Powder coated

- Resin powder baked process
 - Excellent adhesion to AL
 - Exceeds NZ and AU standards
 - Coating thickness <1mm (0.08mm)
 - Approx. 90 stock colours
 - MTO colours available on request
 - Smooth finishes
 - Textured finishes
 - Metallic finishes
 - Anti-graffiti coatings
-
- 10/20/25 year warranties available

Anodised

- Electrolytic oxidisation process
 - Acid Wash
 - Caustic Wash
 - Extremely durable finish
 - Provides a non uniform colour finish
 - Meets NZ and AU standards
-
- 10 year warranty

Sublimated

- Graphic Effects
 - Corten/ weathered steel Effect
 - Mottled Effects
 - Woodgrain Effects
-
- **No Warranty applicable

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1. Powder Coat (max lengths available 8.3m)

Powder coating is the industrial coating process where the freshly extruded Nu-Wall® boards (mill finish) are passed through a pre-treatment process, then a plastic resin powder coating is electrostatically applied and baked off in a high temperature curing oven producing a hard wearing resilient coating that is both abrasion and UV resistant.

Nu-Wall® boards can be powder coated in any colour from the published Dulux and Interpon colour ranges. Dulux is made and stocked in NZ, whereas Interpon is manufactured and supplied out of Australia. (delays can occur)

As a rule, Nu-Wall® powder coated cladding is always supplied in a matt finish. Gloss is available but not recommended as an enduring exterior finish choice.

1a. Matt Smooth Finish – solid colours

These products offer the largest stock colour range and are a common Nu-Wall® finish specification. They produce a smooth, consistent finish with the most economical pricing structure.

A smooth powder coated finish on top of the very smooth flat Nu-Wall boards provides an extremely smooth consistent surface. The flipside of this very smooth finish, is that it can highlight finger printing (eg: KFC fingers!), scratches and user damage, due to the very smooth flat finish highlighting any imperfection.

Nu-Wall® recommends the use of textured finishes which are easier to live with under the normal wear and tear that a building is subjected to.

** Nu-Wall® recommends caution around the use of smooth matt black over our smooth board surfaces.

Very visible finger-printing or suntan lotion stains may occur.



Mannex Matt Black SS200

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1b. Matt Textured Finish

With the rising popularity of aluminium front doors, it became very apparent that “finger-printing” on smooth surfaces was a cosmetic issue. The Powder coating manufacturers developed their textured surfaces (Mannex in Dulux-speak and Textura in Interpon-speak).

Textured finish offers a rougher, grittier, more natural finish to Nu-Wall cladding which is much easier for the owner to live with, as they are very resilient to scratches and greasy marks, obscuring 90% of the marks that would be apparent on smooth surfaces.

Nu-Wall® recommends you seriously consider textured finishes on Nu-Wall® cladding.

Textured finishes are available in both solid and metallic colours. The texture of the solid colours tends to be rounder (smoother) whereas the metallic texture is grittier (rougher).

The powder coating companies offer a limited range of textured colours, often with a lower 10 year warranty specification.

Nu-Wall® has however developed a proprietary range of Dulux specific textured made to order (MTO) colours with a 20 year warranty (Duratec) – please ask us.

** If you would like to use Matt Black, Nu-Wall® recommends Mannex or Textura Matt Black, which will minimise finger printing and other marks.

Natural Attributes of textured finishes to consider:

- Texture tends to lighten the colour shade by one shade. This is not a change in colour but rather having light reflecting off multiple surface angles.
- Texture can visibly vary with different profiles, especially when they are combined in random width cladding profiles. This will show as “planking” when viewed from an angle. With random vertical cladding arrangements this can be seen as a desirable Architectural feature.



Mannex matt black E Random

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1c. Metallic Finish

The addition of metallic flakes adds another dimension of colour “life” to a powder coated surface.

The metallic component reflects light, both direct and ambient, giving a greater range of colour. The metallic finishes tend to reflect the ambient light conditions – dark tones on a dark day and brighter tones on a light day.

Metallic inclusions come in several specifications:

- Ultra fine metallic inclusions, creates a surface that will uniformly change with varying light conditions (Platypus, Window Bronze, ...).
- Course metallic inclusions that sparkle. (Coaldust, ...).
- Multiple coloured metallics. These are the most extraverted effects with gold, red, blue, green metallic flakes creating a dynamic, ever changing façade. (Electro Tiberius, FRED, Blueit etc).

Natural Attributes of metallic finishes to consider:

Metallics can make the surface behave more like a gloss when used with a smooth finish – more susceptible to showing imperfections.

- Coatings featuring heavy metallic inclusions (large metallic flakes) can appear splotchy (light and dark areas)– this is due to light reflection off the flat metallic surfaces. As you move past the surface, the splotches move with you – its dynamic. Tiberius is a classic example of this very dynamic natural attribute.
- A “planking” patina can be noted under certain angles and light conditions displaying difference in light reflectance between wide and narrow boards.



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1d. Textured Metallic Finishes

The latest developments from the powder coating manufacturers are in the areas of textured metallic coatings.

The texture overcomes the tendency of metallic coatings appearing as a gloss and adds another dimension and provides robust impact resilience.

A textured metallic will display a grittier texture than the more rounded solid Dulux Mannex texture – a bit like fine sandpaper.

This is a more costly process as the powder coating manufacturers need to “bond” the metallic particle in a resin coating prior to blending with the pigmented main resin. Dulux offers the “Electro” range of colours which offer a more dynamic extroverted colour option.

Nu-Wall can supply MTO textured metallic colours, however there are minimum quantity restraints that apply to the order – See MTO section below



Dulux Electro Colour Range

1.e Made to Order (MTO) colours

Occasionally, clients request custom colours (often trying to match a published wet paint colour). An MTO is a colour made to a specification that is not available as a standard stocked colour.

Custom colours can be produced however there are some constraints:

- MTO colours can be produced with a minimum batch size (50-150Kg dependent on colour/chemistry).
- Be aware that if you specify a MTO and in the future a couple of boards require replacement, a new batch will need to be manufactured as these are custom colours and not stocked.
- MTO's carry a price premium over stocked colours.
- MTO's require a longer lead time to produce - allow 2-3 weeks for a Lab production which is then available for approval by the client before the main batch is manufactured.

Nu-Wall carries several common MTOs – typically Mannex colours where we supply a 20-year warranted Duratec, where the Dulux stocked specification is a Duralloy 10-year warranty specification



2. Anodising (max lengths available 7.0m)

Unlike powder coating which provides an 80-micron coating on top of the base aluminium, anodising is an electro-chemical process that infuses a 25-micron hard-anodised layer into the aluminium.

Anodising is a semi-transparent coating where the base aluminium is semi-visible through the coating.

Anodising allows the Designer to offer a raw and natural surface coating. Anodising is quite dynamic in reflecting the ambient light and can range from a golden glow in direct light through to a sullen brown in low-light conditions.

Anodised Colour Options

- Natural – Silver raw aluminium look
- Champagne – Pale honey shade of Bronze
- Light Bronze
- Medium Bronze
- Dark Bronze
- Black

Natural Attributes of Anodised finishes to consider:

The variables in the anodising process means that anodised Nu-Wall will always arrive in a variety of shades of the selected colour. Every batch of approximately 18 boards, will have a shade variation.

This natural inconsistency attribute allows the designer to create a planking patina.

Nu-Wall requires the builder to open all boxes received and to randomly select boards as the cladding is installed, thus ensuring an even spread of tone

****exact colour consistency is not possible with anodising****



Anodised Pre- treatment options

There are two **pre-treatment options** for anodising which, given anodising's semi-transparent nature, giving the Designer options on the final anodised finish effect.

Acid wash

An acid washed pre-treatment removes most of the extrusion lines from the base aluminium and leaves the aluminium with a matt, more consistent finish.

Acid wash goes under different names from the various suppliers and can be called Niche or Frosted.

The extrusion companies prefer to supply acid finish as it removes many of the inconsistencies of the anodising process and results in fewer complaints of inconsistent finish.

Caustic wash

This does not remove the extrusion lines and leaves the base aluminium with a brighter, shinier finish with multiple visible streaks and lines – much like the character of natural timber. There will also be more variety in colour from batch to batch, resulting in a greater “planking” effect when completed.

A caustic wash anodised surface will exhibit significantly more change in different light conditions.

Many suppliers do not recommend this process due to the difficulty in achieving a consistent finish, however this is a valid option with the anodised sample image above, highlighting the “randomised” finish of anodised surfaces showing all the natural attributes including glowing sun-strike, random colours and longitudinal streaks.



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3. Sublimated Coatings (max lengths available 7.2m)

The sublimation process is a two-stage process where the board is first coated and cured with a base powder coating (20-25 year warranty), then a plastic film with a pattern is vacuum formed over the pre-coated board, sealed, then placed in the curing oven for a second time.

The pattern in the film bakes into the base coating creating a permanent, unique patterned and textured finish. These provide the opportunity to supply Nu-Wall claddings in a large variety of special effects.

The most common form of a sublimation coating is the popular woodgrain finish. There are dozens of options which vary both base colour and patten, replicating many different wood types.

Nu-Wall can also supply boards that replicate Corten Steel, Aged Copper, Concrete and even carbon fibre!

Applying sublimation coatings is a two-stage, labour intensive process so this attracts a cost premium, typically plus \$60/m2 over standard powder coated product.



Woodgrain Sublimation E-200



Concrete look



Concrete look



Aged Copper look



Woodgrain look

Care and Maintenance of Coated Surfaces

The best repair is no repair.

Always refer to the coating suppliers' recommendations before commencing any cleaning.

Powder coated Surfaces

- Regular Building wash will be required in line with the buildings environmental environment zone – typically 6-12 months. (refer manufacturers requirements)
- Removal of construction dirt and installation fingerprints can usually be achieved using a soft brush using a PH neutral detergent.
- Detergent washing should not be undertaken in direct hot sunlight. Soap marks will be baked into the paint surface
- All detergent residue **MUST** be rinsed off the surface of the Nu-Wall.
- Powder coatings are a baked on plastic resin and as such solvent or **bleach based cleaning products cannot be used.**
- For stubborn stains, use Isopropyl Alcohol based cleaners such as Selleys Alcohol Wipes. These have been specifically developed to clean powder coated surfaces.
- Scratches can be minimised using touch-up paint kits commonly called “dab sticks” (supplied by Nu Wall).
- **Never** spray paint damaged powder coated surfaces with DIY spray can products.
- Spray paints are typically lacquer based and will fade within a couple of years of UV exposure causing pale splotches.
- In the case of serious damage, the boards can be replaced.

Anodised Surfaces

- Regular Building wash will be required in line with the buildings environmental environment zone – typically 6-12 months. (refer manufacturers requirements)
- Construction dirt, smears and even paint smudges can be removed with detergent, alcohol based or solvent based cleaning products.
- Scratches can be touched up using colour matched paint “Dab-sticks”.
- Non-compatible materials: Lime run-off/splashes from concrete products or from unsealed concrete surfaces located above the anodised Nu-Wall clad walls

Nu-Wall® Care and Maintenance of Coated Surfaces

- The best repair is no repair.
- Always refer to the coating suppliers' recommendations before commencing any cleaning.
- Regular Building wash will be required in line with the buildings environmental environment zone – typically 6-12 months.



1. Always clean metal cladding in warm shady conditions, never direct sunlight



2. Always refer Dulux and Interpon warranty requirements before using chemicals
3. Use Low PH detergents only
4. Use weak warm soapy mixture
5. Selleys' Wipes or similar Isopropyl Alcohol based cleaners



6. Use a soft brush, sponge or power wash
7. Wash down as you go with fresh water after every few m²
8. Never leave soap/detergents to dry on any surface



9. Use caution when using commercial cleaning, spider control services – refer 2 above
10. Never use aerosol-based spray paint or cleaning products
11. Only use Nu Wall supplied colour matched dab sticks for scratches

Warranties

Extruded Aluminum Sections

The extruded sections are manufactured, from alloy of 6063 designation, in accordance with NZS 3504:1979, Amend. 1:1998, clause 5.1.1, and will comply with MBIE clause B2(Durability), clause B2.3.1c, for a durability of 15 years, in accordance with the clauses 1.2.1b, 1.2.1e, 1.3.1 & 2.1 of Acceptable Solution B2/AS1.

- Subject to normal use Nu-Wall offers a 100year warranty (or the lifetime of the building) on the mill finished aluminium extruded boards and components.

Surface Coatings

Powder Coated Finish

The extruded aluminium sections are powder coated in accordance with AS 3715:1989 and/or BS 6496:1984, Amend. 1:1992 and will comply with MBIE clause B2 – (Durability) clause B2.3.1c, for a durability of 5 years, in accordance with the clauses 1.2.1c, 1.2.1f, 1.3.1 & 2.1 of Acceptable Solution B2/AS1, provided the specified maintenance program is implemented.

- The basic Dulux Duralloy specification coating offers a 10-year warranty (Residential projects only)
- Nu-Wall prefers to supply Dulux Duratec / D20/25 coatings which offer a 20 or 25-year durability warranty. (Residential and Commercial projects)
- Some colours will offer a differential warranty between durability and colour, typically 20-year durability and 15-year colour. (check with Nu-Wall)
- Sublimation coatings typically offer a 20-year durability warranty, but 0-10 years on the sublimation pattern.

Anodised Finish

The extruded aluminium sections are anodized in accordance with BS 3987:1991 and will comply with the Department of Building & Housing Document, B2 – Durability, clause B2.3.1c, for a durability of 5 years, in accordance with clauses 1.2.1c, 1.2.1f, 1.3.1 & 2.1 of Acceptable Solution B2/AS1, provided the specified maintenance program is implemented.

- Anodising carries a 10-year manufacturer's warranty for 25-micron product covering colour

Sublimated Finish

- No warranties available on sublimated finishes

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Matt Black E200



Flaxpod Mono 200



Flaxpod Mono 200



Flat White E100



Intensity Red Mono 200

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Black E200



Platypus E-200 (V)



Anodised Medium Bronze E-Random (V)



Matt Black E200 (H)



Matt Black e-Random (V)



Anodised Natural Mono 200 (V)

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Matt Black E-200 (V)



Platypus E-Random



Window Bronze E-Random



Colour Aero 100



Autumn Colours Mono200



Various colours Mono200

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Anodised Medium Bronze E-Random



Colour and Louvre 60



Matt Black E-200 (V)



Appliance White E-200 (V)



Gull Grey E-200 (V)



Anodised light bronze E-200 (V)



Matt Ironsand E-Random



Red and Gul Grey E-200 (V)

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