

PRODUCT SOLUTIONS

FLUOROSET®

POWDERCOAT RANGE



ULTRA DURABLE
FLUOROPOLYMER



SOLID COLOUR
LOOK



PEARLESCENT
LOOK

Dulux®

**POWDER
COATINGS**



New Zealand

Worth doing, worth Dulux®

Worth doing, Worth Dulux.®

The Fluoroset Powder coat Range is a collection of on trend solid colours, and a collection of beautiful pearlescent and metallic finishes. Both collections are delivered with warranty grade advanced ultra durable fluoropolymer thermosetting powder.

- ✓ Ultra durable finish
- ✓ Superior colour retention
- ✓ Allure collection of pearlescent and metallic finishes
- ✓ Xtreme collection of on trend solid colours
- ✓ Custom colour service available



The project: Perth Arena, Australia.
Photo credit: Cameron Chisholm Nicol/
Greg Hocking Photograph

Suitable substrates

Fluoroset is ideal for warranty grade applications over:

- Architectural aluminium including perforated and expanded aluminium.
- Steel (mild), bright/semi bright steel, black steel and blue steel.

Fluoroset can also be used on the following metals but these are not warranted:

- Galvanised steel, stainless steel and Zincalume®.

Project types

Fluoroset is suitable for use on architectural aluminium and steel on most exterior project types including those less than 10m from the high tide mark. Fluoroset is also suitable for most interior projects (including all NZ Building Code Classifications).

	NON-HABITABLE	RESIDENTIAL <4 LEVELS	RESIDENTIAL >3 LEVELS	LIGHT COMMERCIAL <4 LEVELS	COMMERCIAL >3 LEVELS	PRESTIGIOUS COMMERCIAL	MONUMENTAL
INTERIOR	•	•	•	•	•	•	•
EXTERIOR	•	•	•	•	•	•	•

- Non-habitable projects are those that are not dwelling types. Examples can be furniture, bus shelters, signage etc.
- Residential properties < 4 levels are typically easy to maintain, given their height and access.
- Light commercial projects <4 levels are sheltered from neighbouring buildings, but require greater durability due to higher usage and wear.
- High-rise residential and commercial projects are less sheltered from neighbouring buildings, raising their exposure and reducing their ease of maintenance.
- Prestigious commercial projects attract attention and require high quality finishes to uphold the longevity and design requirements.
- Monumental projects attract the most attention and have the highest standards required to uphold the reputation and protection expected from landmark sites.

Warranty benefits

The Dulux Fluoroset range are supported by Dulux Alumi Shield™ and Dulux Steel Shield™ warranties when applied by a Dulux Accredited or Dulux Prime Accredited Powder Coater to the warranty specification on recommended project types and conditions.

Alumi Shield™ Warranty	Steel Shield™ Warranty
The Alumi Shield™ warranty is made up of two key components, a colour warranty (for fade and chalking) and a durability warranty (film integrity)	The Steel Shield™ warranty is made up of two key components, a colour warranty (for fade and chalking) and a corrosion warranty

Terms and conditions apply

- The Alumi Shield™ and Steel Shield™ colour warranties are your assurance that Fluoroset will not:
 - Fade** – Fade testing will not give a delta E (Hunter) laboratory reading greater than five units from the original colour.
 - Chalk** – The rate of chalking will not exceed a rating of 2 for whites and pastels and a rating of 3 for deep colours as assessed in accordance with AS1580.481.1.1.1 test method.
- The Alumi Shield™ durability warranty is your assurance the powder coating won't peel, crack or flake during the warranty period, from the date the product is applied to the metal.
- The Steel Shield™ corrosion warranty is your assurance that the coating system will not corrode more 5% in accordance with the degree of corrosion as a percentage contained in AS 2312.1
- Warranties are only valid when applied by a Dulux Accredited or Dulux Prime Accredited Powder Coater to the warranty specification on recommended project types and conditions.

Important design considerations

Dulux Alumi Shield™ and Steel Shield™ warranties are available on a wide range of fabricated architectural aluminium and steel items, but those items must be designed, prepared (pre-treated), coated, fabricated and installed to standard ensuring that the item is fully protected.

It is essential that any item that is coated must be designed and fabricated to ensure:

- **It meets key standards** – Refer to AS 2312.1 and the relevant building code.
- **Protection is a key consideration at the early stages of design** – The design should allow the item to be prepared for coating correctly and that the minimum thickness of the specified coating can be achieved.
- **Sealed areas are appropriately sealed to last the duration of the warranty** – It is essential that the choice of other materials that contribute to protection such as sealants should be made to ensure that a Alumi Shield™ and Steel Shield™ warranty is not void due to the sealants failure. This is important if only one side of a section of metal be coated, it must be in a sealed environment, i.e. not exposed to moisture, air and excessive heat. Should the seal fail, and a claim is made this warranty will be void as the integrity of the seal is not the responsibility of Dulux.
- **The following design elements are avoided** – Narrow crevices, poor air circulation, depressions, sharp edges and corners, large flat ledges (not window ledges), intermittent welding, undrained flat surfaces, unsealed hollow sections, flat surfaces in loose contact where moisture may be drawn in between them by capillary action or where water and foreign matter will lodge, as these areas may result in premature failure of the coating system.
- **Failure caused by post formed or post fabrication processes are avoided** – Please be aware warranties shall not apply to areas where a failure is caused from post formed or post fabrication processes, such as metal perforation, welding or any other circumstances beyond the reasonable control of Dulux. Many post fabrication processes can impede achievement of a continuous layer of pre-treatment and the minimum film build of powder coating. Where there is doubt please consult the relevant guideline or regulation such as the building code or window association for information on mitigating any potential damage that could be caused by post fabrication processes.

For full details on Alumi Shield™ and Steel Shield™ warranties including terms and conditions visit duluxpowders.co.nz/warranties

Project suitability

Use the following tables to help identify where Fluoraset can be applied on aluminium and steel projects. Refer to the conditions information to determine the environment that your project will be exposed to.

Project suitability – aluminium

Project, Environment and Conditions			Top Coat	
Project Type	Environment	Conditions	Fluoraset	
			Durability Warranty	Colour Warranty
Monumental	Exterior	Mild, Severe	35 Years	30 Years
Prestigious Commercial	Exterior	Mild, Severe	35 Years	30 Years
Commercial	Exterior	Mild, Severe	35 Years	30 Years
Light Commercial	Exterior	Mild, Severe	35 Years	30 Years
Residential	Exterior	Mild, Severe	35 Years	30 Years
Non Habitable	Exterior	Mild, Severe	35 Years	30 Years
All Projects	Interior	Moderate Interior	35 Years	30 Years
All Projects	Interior	General Interior	35 Years	30 Years

Fluoraset warranties.

All Fluoraset Alumi Shield™ and Steel Shield™ warranties are:

- May be suitable for coastal environments <10m from the high tide. Consult with Dulux.
- Not suitable in strongly acidic or caustic environments so the pH must be between 5 and 9.
- Available only when applied by a Dulux Accredited or Dulux Prime Powder Coater to the warranty specification on recommended project types and conditions.

Please refer to page 6 for warranty implications for:

- Interior and exterior environments close to liquids other than the sea
- Geothermal environments.

Perforated and expanded aluminium

Alumi Shield™ warranties on perforated and expanded aluminium are available for Fluoraset in the following environments:

- Interior** – General Interior conditions (E-Prime/Grey Primer base coat not mandatory); Moderate Interior (E-Prime/Grey Primer base coat mandatory).
- Exterior** – Mild (E-Prime/Grey Primer base coat not mandatory); Severe: (E-Prime/Grey Primer basecoat mandatory).

For more information about specifications on perforated and expanded aluminium visit duluxpowders.co.nz/perforated-aluminium

Conditions

Use the following table which references AS 2312.1, SNZ TS 3404 and ISO 9223 to identify the environment, conditions and atmospheric corrosivity categories. To further pinpoint your project this table can be used together with the Dulux Macroclimate Corrosivity Zone Maps of New Zealand Guide available at duluxpowders.co.nz

Environment	Conditions	Corrosivity Zone ⁴	Aluminium Corrosion Rate (g/m ²) ⁵	Carbon (Mild) Steel Corrosion Rate (g/m ²) ⁴	Example Environments
Exterior Environment	Mild	C2 Low	≤ 0.6	10–200	Arid, dry, urban, inland, city
		C3 Medium	0.6 – ≤ 2.0	200–400	Light Industrial, geothermal (>500m from source) ¹ and inland coastal (mild sea spray zone)
	Severe	C4 High	2 – ≤ 5	400–650	Sea shore (medium sea spray zone), offshore Islands ³ and or geothermal (<500m from source) ²
		C5 Very High Marine & Industrial	5 – ≤ 10	650–1500	Sea shore (high sea spray zone e.g. surf), offshore Islands ³ and heavy industrial

Project suitability – steel

Project Type	Environment	Corrosion Category (including Corrosivity Level)	Primer System		Top Coat	
			Zincshield	E-Prime™/Grey Primer	Fluoraset	
					Corrosion Warranty	Colour Warranty
Monumental	Exterior	Severe (High to very high)	✓	✓	5 Years	30 Years
Monumental	Exterior	Mild (Medium)	✓	Optional*	5 or 10 Years*	30 Years
Monumental	Exterior	Mild (Low)	✓	-	10 Years	30 Years
Commercial	Exterior	Severe (High to very high)	✓	✓	5 Years	30 Years
Commercial	Exterior	Mild (Medium)	✓	Optional*	5 or 10 Years*	30 Years
Commercial	Exterior	Mild (Low)	✓	-	10 Years	30 Years
Residential	Exterior	Severe (High to very high)	✓	✓	5 Years	30 Years
Residential	Exterior	Mild (Medium)	✓	Optional*	5 or 10 Years*	30 Years
Residential	Exterior	Mild (Low)	✓	-	10 Years	30 Years
Non Habitable	Exterior	Severe (High to very high)	✓	✓	5 Years	30 Years
Non Habitable	Exterior	Mild (Medium)	✓	Optional*	5 or 10 Years*	30 Years
Non Habitable	Exterior	Mild (Low)	✓	-	10 Years	30 Years
All Projects	Interior	Moderate Interior (High)	✓	✓	5 Years	30 Years
All Projects	Interior	Moderate Interior (Medium)	✓	Optional*	5 or 10 Years*	30 Years
All Projects	Interior	General Interior (Very low to low)	✓	-	10 Years	30 Years

*Important Primer Advice

1. In Mild (Medium) exterior environments and Moderate (Medium) interior environments a 10 year corrosion warranty is available with a Zincshield, E-Prime/Grey Primer and a Fluoraset top coat system.

2. Without E-Prime/Grey Primer a 5 year corrosion warranty is available.

For all projects in severe conditions it is recommended to speak to a Dulux Account Manager or call the Advice line on **0800 800 975**.

For more information about specifications call our Advice line on **0800 800 975** or visit duluxpowders.co.nz

Environment	Conditions	Corrosivity Zone ⁴	Aluminium Corrosion Rate (g/m ²) ⁵	Carbon (Mild) Steel Corrosion Rate (g/m ²) ⁴	Example Environments
Interior Environments	General Interior	C1 Very Low	Negligible	<10	Dry interiors (homes, offices, shops)
		C2 Low	≤ 0.6	10–200	Minor condensation (warehouses, sports halls)
	Moderate Interior	C3 Medium	0.6 – ≤ 2.0	200–400	High moisture (dairy and food processing plants, breweries, and commercial laundries)
		C4 High	2 – ≤ 5	400–650	Significant contamination (swimming pools)

1. Geothermal environments greater than 500m of a bore, mud pool, steam vent, or other source with a pH between 5 and 9. For a pH outside this consult Dulux.
2. Geothermal hot spots within 500m of a bore, mud pool, steam vent, or other source.
3. All offshore islands including Waiheke Island, Stewart Island, Fraser Island and Pacific islands e.g. PNG, Fiji, Samoa, Tonga, Tahiti, Noumea.
4. The corrosion rates for the first year of exposure for the different corrosivity categories of Aluminium and Carbon (Mild) Steel are determined by the following standards:
 - SNZ TS 3404 - Standards NZ Technical Specification – Durability requirements for steel structures & components.

5. The corrosion rates for the first year of exposure for the different corrosivity categories of aluminium are determined by the following standard:
 - ISO 9223 - Corrosion of metals and alloys – Corrosivity of atmospheres – Classification, determination and estimation.

Important warranty considerations

Your warranty can also be impacted by its proximity to liquids other than the sea and geothermal environments whilst a regular care and maintenance program must be implemented for warranty compliance.

Interior and exterior environments close to liquids other than the sea

For powder coated assets close to liquids other than the sea, e.g. fences near swimming pools, fountains, bathrooms or furniture etc, please refer to the guidance below to understand the warranty limitations in these environments.

	Chemically Treated ¹	Clean tap, Fresh or Potable Water	Salt Water ¹	Other
Fluoraset	◆	●	◆	Seek advice from Dulux Call 0800 800 975

1. Aggressive liquids such as chemically treated liquids and salt water must be cleaned off immediately as per the Dulux Care and Maintenance guide.

Please note chemically treated water includes antimicrobial treatments, e.g. in pools, anti-corrosive chemicals, and soapy water in bathrooms and showers.

◆ Where indicated Alumi Shield™ and Steel Shield™ warranties are available on areas >than 1m from the liquid.

● Where indicated Alumi Shield™ warranties are available any distance from the liquid.

Alumi Shield™ and Steel Shield™ warranties are only available when applied by a Dulux Accredited Powder Coater to the warranty specification on recommended project types and conditions.

All Dulux powder products are NOT suitable in strongly acidic or caustic environments so the pH must be between 5 and 9.

Alumi Shield™ and Steel Shield™ warranties are not available if the powder coating is immersed in any liquid.

Geothermal environments

For powder coated assets close to geothermal zones, the choice of product is dependent on the level of geothermal activity and specifically the distance from the geothermal source. As Fluoraset is ultra durable it is suitable for environments close to geothermal activity (within 500m of the source) and beyond. The corrosion zones or categories still apply based on distance from the sea and other factors.

* Distance to Geothermal Environment	Duratec Zeus
Less than 500m from source	✓
Greater than 500m from source	✓

* Distance from bore, mud pool, steam vent, or other source with a pH between 5 and 9. For a pH outside this consult Dulux.

For more information about specifications in geothermal environments visit duluxpowders.co.nz/geothermal

Securing your warranty

Dulux Accredited Powder Coaters

Only Dulux Accredited and Dulux Prime Accredited Powder Coaters are able to issue our Dulux Alumi Shield™ and Steel Shield™ warranties after demonstrating their capability to meet stringent quality conditions and international standards. Warranties are only valid when applied by a Dulux Accredited or Dulux Prime Accredited Powder Coater to the warranty specification on recommended projects, and subject to specified warranty terms and conditions.



For more information visit duluxpowders.co.nz/accredited

Product summary

Product Features	
Warranties	Alumi Shield™ and Steel Shield™ available – refer to Warranty Benefits.
Technology	Ultra durable fluoropolymer thermosetting powder. Fluoraset Allure finishes containing pearlescent/mica and metallic pigments scatter and reflect light in a random way, therefore, exact colour uniformity should not be expected. Some subtle colour and appearance changes should also be expected when viewing in different light, at different angles and from varying distances. It is recommended that each project is coated with the same batch of powder, by the same applicator, in the same direction, i.e., all vertically or all horizontally and if possible at the same time. This is especially important when large visible areas of a project are powder coated, for example, cladding and perforated and expanded aluminium sheets.
Look	Fluoraset Xtreme solid colours Fluoraset Allure pearlescent and metallic
Finish	Matt, satin and gloss
Colour range	Available in a comprehensive range of core colours. View the range in Dulux Colour Selectors, on aluminium swatches, or online. Cards and swatches can be ordered from duluxpowders.co.nz . If you cannot find the colour you require Dulux can offer a Custom Colour Service. Call 0800 900 975 or visit duluxpowders.co.nz
Standards met	Formulated to meet: AS 3715, AAMA 2603, AAMA 2604 and AAMA 2605.
Product Benefits	
Colour retention	Superior colour retention.
Durability	Ultra durable finish.
Aesthetic	Long lasting solid, pearlescent and metallic finishes.

Meets international standards

With over 50 years of experience, the AAMA (American Architectural Manufacturer's Association) is regarded as the standards leader for finishes on architectural aluminium. Dulux Fluoraset is formulated to meet: AAMA 2603, AAMA 2604 and AAMA 2605 as well as Australian standard AS 3715.

For more information visit aamanet.org

Advice line

Our dedicated consultants can help simplify the specification process, saving you time and money by providing the right coating advice for your project. They can provide:

- Documented project specific specifications
- Written confirmation of your project's eligibility for an Alumi Shield™ or Steel Shield™ warranty
- Design, coating system and colour advice

Call 0800 800 975 or visit duluxpowders.co.nz

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