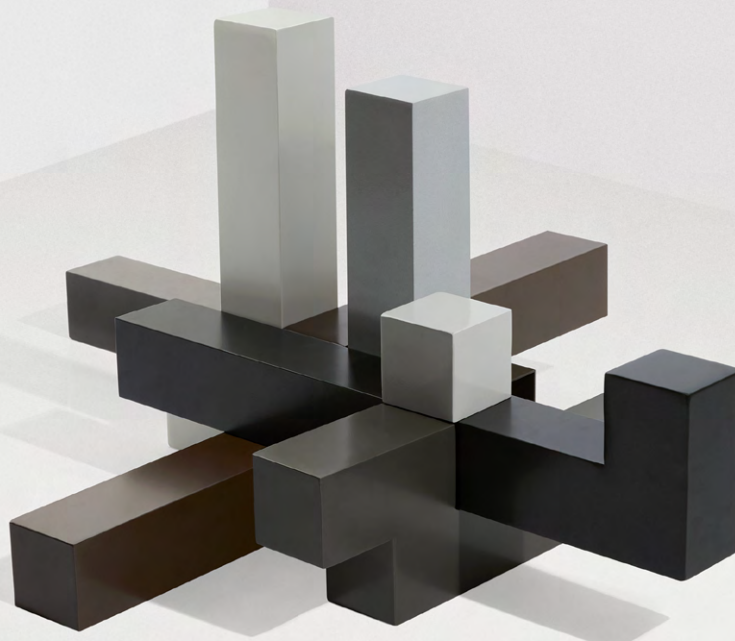


PRODUCT SOLUTIONS

DURALLOY®

+PLUS PEARLESCENT RANGE



Worth doing, worth Dulux.®

The Duralloy +PLUS pearlescent range is a collection of beautiful, decorative pearlescent and metallic finishes, delivered with warranty grade* advanced highly durable polyester thermosetting powder.



- ✓ Highly durable finish
- ✓ Very good colour retention
- ✓ Beautiful, decorative pearlescent and metallic finishes
- ✓ CustomColour™ service available



Suitable substrates

The Duralloy +PLUS pearlescent range 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.

The Duralloy +PLUS pearlescent range can also be used on the following metals but these are not warranted:

- Galvanised steel, stainless steel and ZINCALUME®.

Project types

The Duralloy +PLUS pearlescent range is suitable for use on architectural aluminium and steel on exterior residential buildings and light commercial buildings less than 4 levels as well as non-habitable projects that are greater than 10m from the high tide. The Duralloy +PLUS pearlescent range is also suitable for interior applications across most project types.

	 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.

* 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. Visit duluxpowders.co.nz/warranties for more information.

Warranty benefits

The Duralloy +PLUS pearlescent range is 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

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



Steel Shield™ Warranty

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 the Duralloy +PLUS pearlescent range 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 AS1580.481.1.11 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.
- The Alumi Shield™ and Steel Shield™ warranties are only valid if maintained within the Dulux recommended Care and Maintenance guidelines.
- The Dulux Alumi Shield™ and Steel Shield™ warranties are warranties in relation to the relevant Dulux products to which they relate. Dulux Alumi Shield™ and Steel Shield™ warranties do not cover the services required for application.

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.
- **Uncoated areas are appropriately sealed to last the duration of the warranty** – It is essential that the choice of other materials that contribute to protection of uncoated areas such as sealants, should be made to ensure that an Alumi Shield™ or Steel Shield™ warranty is not void due to the sealant's failure. When aluminium or steel items are exposed to interior and exterior environments it is essential that should only one side of a section of metal be coated, it is appropriately sealed or if a section is cut exposing the raw metal it must be sealed with an appropriate small joint sealant to protect the non-coated area from the environment, i.e. not exposed to moisture, air and excessive heat. Should the seal fail, and a claim is made for a Steel Shield™ or Alumi Shield™ warranty project the warranty for the area affected 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, cutting 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 the Duralloy +PLUS pearlescent range can be applied on aluminum 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	Duralloy +PLUS Pearlescent Range	
			Durability Warranty	Colour Warranty
Light Commercial (<4 Levels)	Exterior	Mild, Severe	15 Years	15 Years
Residential (<4 Levels)	Exterior	Mild, Severe	15 Years	15 Years
Non Habitable	Exterior	Mild, Severe	15 Years	15 Years
All Projects	Interior	Moderate Interior	15 Years	15 Years
All Projects	Interior	General Interior	15 Years	15 Years

Duralloy +PLUS warranties

All Duralloy +PLUS pearlescent range Alumi Shield™ and Steel Shield™ warranties are:

- Only suitable for coastal environments >10m from the high tide
- 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:

- Liquids other than coastal, river and lake salt water environments.
- Geothermal environments.

Perforated and expanded aluminium

Alumi Shield™ warranties on perforated and expanded aluminium are available for the Duralloy +PLUS pearlescent range 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 base coat 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, or Dulux SpecMap tool, both 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

Corrosion Category			Primer System		Top Coat	
Project Type	Environment	Conditions (including Corrosivity Level)	Zincshield	E-Prime™/ Grey Primer	Duralloy +PLUS Pearlescent Range	
					Corrosion Warranty	Colour Warranty
Light Commercial (<4 Levels)	Exterior	Severe (High to very high)	✓	✓	5 Years	15 Years
Light Commercial (<4 Levels)	Exterior	Mild (Medium)	✓	Optional*	5 or 10 Years*	15 Years
Light Commercial (<4 Levels)	Exterior	Mild (Low)	✓	-	10 Years	15 Years
Residential (<4 Levels)	Exterior	Severe (High to very high)	✓	✓	5 Years	15 Years
Residential (<4 Levels)	Exterior	Mild (Medium)	✓	Optional*	5 or 10 Years*	15 Years
Residential (<4 Levels)	Exterior	Mild (Low)	✓	-	10 Years	15 Years
Non Habitable	Exterior	Severe (High to very high)	✓	✓	5 Years	15 Years
Non Habitable	Exterior	Mild (Medium)	✓	Optional*	5 or 10 Years*	15 Years
Non Habitable	Exterior	Mild (Low)	✓	-	10 Years	15 Years
All Projects	Interior	Moderate Interior (High)	✓	✓	5 Years	15 Years
All Projects	Interior	Moderate Interior (Medium)	✓	Optional*	5 or 10 Years*	15 Years
All Projects	Interior	General Interior (Very low to low)	✓	-	10 Years	15 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 Duralloy +PLUS 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, K'gari (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.

• AS 2312.1 - Guide to the protection of structural steel against atmospheric corrosion by the use of protective coatings. Part 1: Paint coatings

• ISO 9223 - Corrosion of metals and alloys – Corrosivity of atmospheres – Classification, determination and estimation

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 coastal, river and lake salt water environments and geothermal environments. A regular care and maintenance program must be implemented for warranty compliance.

Environments close to liquids other than coastal, river and lake salt water environments

Please refer to the guidance below for your product choice and to understand the warranty limitations in all environments where powder coated assets are close to liquids other than coastal, river and lake salt water environments (e.g. near swimming pools, fountains, or showers).

	Chemically Treated ¹	Clean tap, Fresh or Potable Water	Salt Water ¹	Other
Duralloy +PLUS Pearlescent Range	◆	●	◆	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 or Dulux Prime 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 Duralloy +PLUS is highly durable it is suitable for environments close to geothermal activity (within 500m of the source) and beyond. For areas that are more than 500 metres beyond the geothermal source, and have been assessed using the smell test as having minimal or non-existent geothermal influence, the standard corrosion zones and distance from liquid or salt water environments apply.

* Distance to Geothermal Environment	Duralloy +PLUS Pearlescent Range
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.

SpecMap

Check your spec easily online

Dulux SpecMap is a smart online tool that helps you identify and specify Dulux Powder Coatings on exterior surfaces of your projects based on project type, location and corrosivity zone.

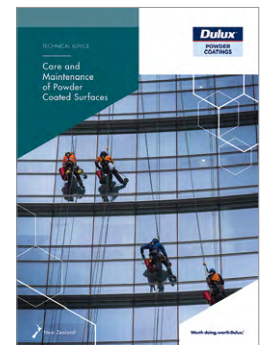
For more information visit duluxpowders.co.nz/specmap

Care and maintenance

Care and maintenance is essential for warranty compliance

To ensure the life of your asset is maximised and to comply with Dulux Alumi Shield™ and Steel Shield™ warranty requirements, a simple and regular maintenance program must be implemented and recorded in line with the Dulux Care and Maintenance of Powder Coated Surfaces brochure.

For more information refer to the Dulux Care and Maintenance of Powder Coated Surfaces brochure visit duluxpowders.co.nz/tech-advice



Product summary

Product Features	
Warranties	Alumi Shield™ and Steel Shield™ available – refer to Warranty Benefits.
Technology	<p>Highly durable polyester thermosetting powder.</p> <p>Duralloy +PLUS pearlescent range 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.</p> <p>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.</p>
Look	Pearlescent and metallic.
Finish	Matt and satin.
Colour range	<p>Available in a comprehensive range of on trend core colours.</p> <p>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 offer a premium CustomColour™ service. Call 0800 900 975 or visit duluxpowders.co.nz</p>
Standards met	Formulated to meet: AS 3715 and exceed AAMA 2603.
Product Benefits	
Colour retention	Very good colour retention.
Durability	Highly durable finish.
Aesthetic	Beautiful, decorative 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. The Dulux Duralloy +PLUS pearlescent range is formulated to exceed AAMA 2603 as well as meet Australian standard AS 3715.

For more information visit fgiaonline.org

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

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

Offices

New Zealand

Dulux Powder Coatings
31B Hillside Road
Glenfield, Auckland 0627
T (64) 4 896 0911

Australia

Dulux Powder Coatings
1-15 Pound Road West
Dandenong South VIC 3175
T (61) 3 8787 4500

Singapore

DGL International Powder Coatings
1 Commonwealth Lane #09-19
One Commonwealth
Singapore 149544
T (65) 6 8381 010

China

DGL International Powder Coatings
Room 406, No.8, Lane 1977, JinShaJiang Road
Shanghai, China, PC 200333
T (86) 21 6173 8800

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