

Dulux®

**POWDER
COATINGS**

PRODUCT SOLUTIONS

ARMOURSPRAY®

ANTI GRAFFITI POWDERCOAT RANGE



New Zealand

Worth doing, worth Dulux®

Worth doing, worth Dulux.®



The Armourspray anti graffiti range is a collection of solid, pearlescent and clear finishes with high chemical resistance allowing the removal of most forms of graffiti, delivered with warranty grade* advanced highly durable polyurethane thermosetting powder.

- ✓ **Highly durable finish**
- ✓ **High chemical resistance**
- ✓ **CustomColour™ service available**



Suitable substrates

Armourspray 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.

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

- Galvanised steel, stainless steel and ZINCALUME®.

Project types

Armourspray 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. Armourspray is also suitable for interior applications across most project types.



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

- Non-habitable/Industrial 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 Armourspray anti graffiti 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	Steel Shield™ Warranty
<p>The Alumi Shield™ warranty is made up of two key components, a colour warranty (for fade and chalking) and a durability warranty (film integrity)^</p> 	<p>The Steel Shield™ warranty is made up of two key components, a colour warranty (for fade and chalking) and a corrosion warranty^</p> 

Terms and conditions apply

- The Alumi Shield™ and Steel Shield™ colour warranties are your assurance that Armourspray 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 than 5% in accordance with the degree of corrosion as a percentage contained in AS 2312.1
- The Alumi Shield and Steel Shield Colour Warranties are not applicable to Armourspray clear products. The Alumi Shield Durability and Steel Shield Corrosion Warranties only apply to Armourspray clear products when applied over Dulux Protecture, Duralloy +PLUS, Duratec, Electro & Charisma powder coatings. The Alumi Shield Durability and Steel Shield Corrosion Warranties do not apply to Armourspray clear products when applied over any other products or directly to an aluminium or steel substrate. When overcoating Dulux powder coatings with Armourspray clear products, the durability or corrosion warranty relating to the clear topcoat will only apply. Any durability, colour or other warranties relating to the overcoated Dulux powders coatings will no longer apply.
- 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 and maintained within the 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 a Alumi Shield™ and 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, drilling 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 Armourspray can be applied on aluminum and steel projects. Refer to the conditions information to determine the environment that your project will be exposed to. To pinpoint your project's corrosivity zone these tables should be used together with the Dulux Macroclimate Corrosivity Zone Maps of New Zealand Guide, or Dulux SpecMap tool, both available at duluxpowders.co.nz

Project suitability – aluminium

Project, Environment and Conditions			Top Coat	
Project Type	Environment	Conditions	Armourspray	
			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

Armourspray warranties

All Armourspray Alumi Shield™ and SteelShield warranties are:

- Only suitable for coastal, river and lake salt water 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 Accredited 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 Armourspray 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 pinpoint your project's corrosivity zone this table should 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	Armourspray	
					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 Zincshield, E-Prime/Grey Primer and an Armourspray 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 be impacted:

1. If the Coating System has been graffitied;
2. By its proximity to other liquids other than coastal, river and lake salt water environments and geothermal environments; or
3. If a regular care and maintenance program is not implemented.

Graffiti

Variables beyond the reasonable control of Dulux such as graffiti type and time elapsed prior to graffiti removal, can impact the performance of the Coating System. If the Coating System has been graffitied and there is a failure in the graffitied area, the warranty will be limited to the areas not impacted by the graffiti. Refer to the advice on page 7 regarding the removal of graffiti.

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. fences near swimming pools, fountains, bathrooms or furniture).

	Chemically Treated ¹	Clean tap, Fresh or Potable Water	Salt Water ¹	Other
Armourspray	◆	●	◆	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 product 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 distance from the geothermal source. As Armourspray 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	Armourspray
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

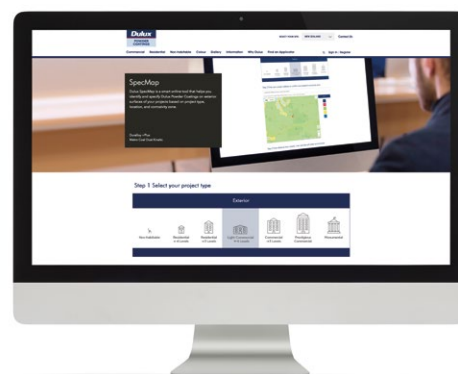
Dulux SpecMap is a smart online tool that helps you identify and specify Dulux Powder Coatings on exterior surfaces of your projects based on project type, location and corrosivity zone.

For more information visit duluxpowders.co.nz/specmap

Heavy Industrial Micro Environments

Please note that the atmospheric corrosivity zone can be superseded for some commercial projects, e.g. airports and manufacturing sites, due to localised influencing factors such as:

- Levels of atmospheric pollution, including salts, dirt and grime can all accumulate over time.
- Winds carry airborne debris that can cause erosive wear of the coating, e.g. sand causing abrasion.



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



How to clean your powder coating in 3 easy steps

1. Carefully remove any loose surface deposits with a wet sponge by gently rubbing.
2. Clean by gently rubbing the surface with a soft brush (non-abrasive) and a dilute solution of a mild detergent, e.g. pH-neutral liquid hand or dishwashing detergent in warm water to remove dust, salt and other deposits. For stubborn stains use only recommended solvents on the affected area, e.g. Isopropyl alcohol (IPA) or methylated spirits and rinse off with clean water. Do not use other aggressive solvents.
3. Rinse the surfaces with clean fresh water after cleaning to remove all residues.

Additional advice for graffiti removal

If the steps outlined above do not remove graffiti from affected areas, follow these steps:

4. Either spray graffiti remover GuardIt® Soy Safe Sensitive or apply GuardIt® Soy Allstone Gel using a soft brush to the affected surface area and leave for at least 5 minutes. Follow the safety instructions listed on the GuardIt® product label. Visit guarditsolutions.com.au for product availability.
5. Using a clean damp soft cloth gently wipe the surface and rinse with clean fresh water to remove all residue.
6. If graffiti is still visible repeat steps 4 and 5 again.

Product summary

Product Features	
Warranties	Alumi Shield™ and Steel Shield™ available – refer to Warranty Benefits.
Technology	<p>Highly durable polyurethane thermosetting powder.</p> <p>Armourspray 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	Solid, pearlescent and clear
Finish	Gloss, satin and matt
Colour range	<p>Available in a range of 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 800 975 or visit duluxpowders.co.nz</p>
Standards met	<p>Formulated to meet: AS 3715 and exceed AAMA 2603. Reaction to fire test results:</p> <p>Classification of fire performance for Armourspray has a Group Number Classification of 1 according to the National Construction Code NCC 2022 Volume One Specification 7 Clause S7C4 of the Building Code of Australia (BCA) 2022 for the classification of wall and ceiling linings and a Group Number Classification of 1-S according to the NZ Building Code Verification Method C/VM2 Amendment 7, Appendix A: Establishing Group Numbers for lining materials.</p> <p>Also available is testing results for Industry Standard: AS/NZS1530.3.</p> <p>For more information call 13 24 99 or refer to the Armourspray: Reaction to fire test results brochure available at duluxpowders.co.nz</p>
Product Benefits	
Colour retention	Very good colour retention.
Durability	Highly durable finish.
Chemical resistance	High chemical resistance allowing the removal of most forms of graffiti with widely available removal products.

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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Foshan, Guangdong, 528200

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Securing your warranty

Dulux Accredited Powder Coaters

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Dulux®Accredited Powder Coater **Dulux®**Prime Accredited Powder Coater 

For more information visit duluxpowders.co.nz/accredited

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