

Dulux Paint Care Guide

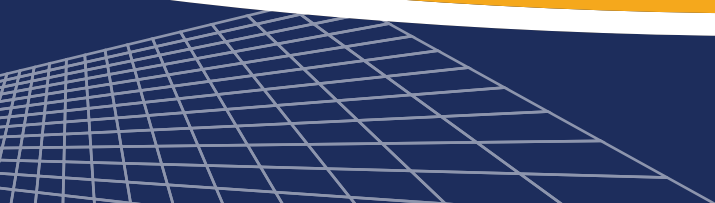
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Project:



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1 Introduction

The purpose of paint is two-fold; it should beautify and it should protect the substrate.

The substrate and the type of protection required should dictate the choice of paint type. For example, in high quality residential projects, Dulux premium quality products and finishes are used not only because of the superior aesthetics achieved, but also for far greater ease of maintenance by the owner/occupier and the property investor.

For the homeowner, the benefits are immediate; you can remove spills, scuff marks and greasy finger marks from walls painted in Dulux premium products that have been specially formulated to resist softening by common cleaning products. The cleaned areas will show far less shine from glancing light or residual stains than if lower quality paint was used.

For the property developer and investor, the benefits are long term as well as short term. For exterior, the better the finish, the better the visual impact and the higher the initial asking price. Over the long term, the more durable finish will require a lower level of maintenance and hence lower maintenance costs, whilst maintaining a high positive visual impact.

In the short term, a better class of finish may earn a higher rental, whilst maintenance between tenant occupations will generally require a wash down only, and will therefore require a repaint far less often than if a less durable, cheaper paint was used.

For exterior situations, reinforced concrete must always be protected by a carbonation resistant, chloride ion resistant and water resistant coating system, as carbon dioxide, chloride ions and moisture are the three major causes of concrete spalling (also known as "concrete cancer").

In coastal environments (up to 6km from the sea) chloride ions from salt easily pass through concrete (even "high strength" concrete) to the reinforced steel and rapidly cause rust nodules on the surface of the steel. The volume of the ferrous corrosion products is eight (8) times the volume of the original steel and the resultant forces against the concrete cause the concrete to crack and spall. The right coating system will prevent this mechanism from occurring.

As another example, steelwork, whether structural or decorative, must have a coating system that includes an anti-corrosive primer, and an intermediate and topcoat that together completely exclude ions, water and oxygen. The system must also be totally resistant to all adverse and extreme conditions to which it may be exposed for a period of time appropriate to the design life of the structure. Factors such as UV light, chemical environment, humidity, precipitation, wind, freeze-thaw cycles, wear and tear by people and/or animals and other likely mechanical damage, etc. must all be considered when choosing a coating system.

Seaside environments present one of the harshest tests for coating systems as the air-borne salt and sand particles conspire to strip off the coating system and aggressively corrode any mild or galvanised steel.

When you add up the cost of paint and the price of labour, painting, like any other contractual work represents a considerable investment. So it makes good sense to extend the life of your paintwork for as long as possible.

Broadly, the answer lies firstly in choosing the right product, applying the paint correctly and allowing the paint to dry thoroughly, and secondly, in knowing how to remove dirt, grease, mould etc., without damaging the paint surface, and regularly performing maintenance checks. Large projects should have a maintenance program in place, with specifications for rectification of mechanical damage and wear-and-tear of the coating system.

2 Interior Paintwork

Typically, the higher the gloss level, the more washable the surface will be. For this reason, flat is usually restricted to the ceilings, and low sheen is usually used for walls. In higher demand areas, such as bathrooms, kitchens and laundries, semi gloss finishes are usually used. In very high demand areas, such as over timber doors and frames, skirting and internal balustrades, full gloss will give the best performance.

Most water-based paints appear to dry out quickly after application, but in fact it takes around a full week under normal climatic conditions to cure and develop full washability. So, if marks appear on newly painted walls within a few days of it being finished, you should resist the temptation to wash it straight away. Instead, give it up to a week to cure then wash it down to your satisfaction.

2.1 Maintenance

Follow these few simple directions for the removal of dirt, scuff marks, etc.

1. Don't use rough abrasives; stiff scrubbing brushes or harsh caustic preparations. These will 'gloss' or polish the surface resulting in obvious highlights, which can only be rectified by repainting.
2. Use warm water to which a small amount of mild detergent (preferably sugar soap) has been added.
3. Apply the solution to the affected area with a soft cloth, or a soft bristle brush where the marking is particularly stubborn.
4. Clean off the stain in a gentle, circular motion. Then remove all residues with a clean, soft cloth rinsed with fresh, clean water.
5. Having thoroughly cleaned the affected area, you should then proceed to wash down the whole wall or ceiling to eliminate any chance of patchiness.

2.2 Repairs to damaged area

Damaged areas should be assessed for the cause of film failure to identify underlying structural weaknesses or design faults. Early identification and elimination of design faults will prevent further damage and minimise the cost of repairs.

Having eliminated any design faults, proceed with spot repairs to areas showing minor damage ensure the surface around the damaged area is sound and clean. Where appropriate, feather the edge of the existing coating. Spot prime with the primer or sealer used in the original paint system, overlapping onto the existing coating. Apply topcoats as specified in the original paint system. For best results, use retained samples of the original topcoats and apply using the same application method and equipment to reproduce the original surface texture. Where original samples are not available, confirm the colour match on a sample board before proceeding with the repair. Spot repairs are difficult to marry in perfectly with the existing coating and should be made as small as possible to minimise the visual impact.

Areas showing major damage should be cleaned, prepared and repainted using the original painting system over the entire area to the nearest architectural breaks such as corners, floors, ceilings, windows or doors. Confirm the colour match on a sample board against neighboring areas.



3 Exterior Paintwork

3.1 Facades

Generally, the maintenance required for exterior coating systems are as follows: for projects in sheltered, inland environments, the following maintenance schedule may be performed once every one or two years. In coastal, industrial or dirty, dusty, polluted city environments, the maintenance schedule may need to be performed as often as every six months. The maintenance schedule may involve just steps 1 & 3 (as a minimum) or may be as comprehensive as steps 1 through 7.

1. A low pressure water wash to remove dirt, dust and other contaminants. The pressure should be adjusted so as to remove most surface contaminants, but without causing damage to the acrylic coating.
2. Persistent dirt remaining after water washing should be removed with a soft bristle brush or broom and warm water and a sugar soap solution. Long-handled applicators, ladders, scaffolding, cherry picker or a swing stage may be required. Thoroughly rinse off immediately with low pressure wash and allow to dry.
3. Examine the surface for signs of mechanical damage, wear-and-tear or other premature coating failure. Where no premature coating failure has occurred, no further action is necessary.

4. At any stage during the warranty period, a fresh coat of the specified Dulux product may be applied to the clean and dry surface. Where premature coating failure has occurred, the next steps shall be followed.
5. Remove all loose or damaged coating back to a hard edge and feather back to remove ridges.
6. Spot prime bare substrate with the same primer as used in the original specification and allow to dry.
7. Apply one coat of the Dulux specified product to the primed area, (preferably using the same type of roller sleeve as that used for the original work, if the size of the repaired area allows).
8. Apply one coat of Dulux specified product (Gloss or Low Sheen, whichever was used originally) on the entire facade panel of the repair area.

Please note that repaired areas may look a little different from the original façade for any of the following reasons:

- The age difference of the old paintwork to the new (paint colour may fade slightly with time)
- The colour matching of old paint to new
- The difference in texture or 'stipple' of the paintwork between the old and new due to variances in paint roller sleeves, application technique etc
- The skill of the applicator.

All the above determine the degree to which the difference is noticeable.

3.2 Painted timberwork

Please note that timber, being a natural material, exhibits a high degree of movement as it flexes and expands in heat and dampness and contracts in cold and dry conditions. Certain types of timber are more prone to grain-cracking too. When a crack occurs in the timber, either along a grain or at joints, acrylic paints will bridge the crack only to a degree, and past that will crack with the substrate. In such cases, if timely maintenance painting is not carried out, moisture will readily enter the crack and absorb into the timber. This entrapped moisture will cause the following problems:

- Blistering of the paint
- Mould growth within the timber fibres
- Greater expansion and contraction of the timber and hence more cracking and more moisture ingress
- Finally, rotting of the timber and widespread peeling of paint.

A planned washing and painting program will enable you to get the longest life from your coating system.



4 Exterior Timber

Thoroughly clean down surface to remove all dust, dirt, salt deposits, mildew, mould, algae, and all other surface contaminants. Where hosing down with clean water is practical, and particularly where the timber has been affected by weathering, showing areas of grey (degraded) weathered fibres, use a solution from one of the Dulux Group woodcare ranges including Cabots, Feast Watson and Intergrain).

Apply using the following system:

1. Apply solution liberally to affected areas with brush or sprayer.
2. Let set 15-20 minutes.
3. Scrub stubborn areas with stiff bristle brush, or repeat application.
4. Rinse off all residues with a garden hose at maximum pressure.
5. Allow to dry thoroughly before staining or finishing.

Wear protective clothing. Protect shrubs and vegetation and avoid splashes to glass windows.

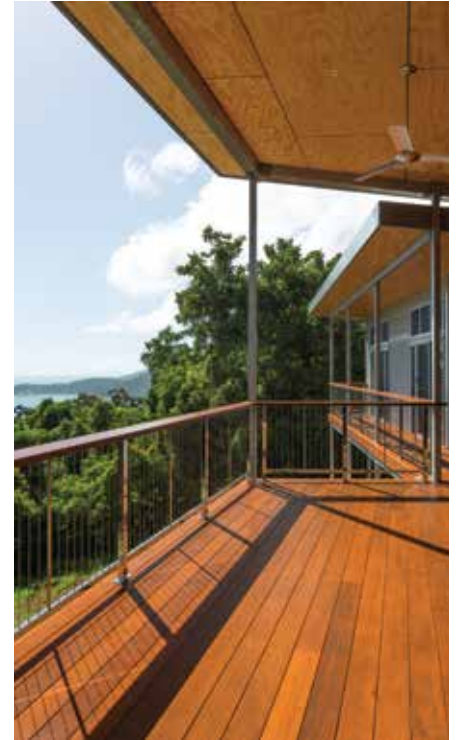
4.1 Repairs

Ensure that the surface around the damaged area is sound and clean, re-apply with the appropriate coating system. Endeavour to identify original colour and batch number for best results (ideally coating schedules should allow for some material to be available for subsequent repair work such that colour uniformity can be obtained, alternatively retention of a reference colour sample will be of assistance).

4.2 Periodical inspection

Yearly inspections give the opportunity to address potential problems with usually a simple touchup.

The northerly aspect is usually the first to show signs of deterioration. For areas finished with a semi-transparent stain, it is advisable to apply a fresh coat each twelve months, after washing down with Feast Watson® Woodclean (or similar) Areas to pay particular attention include: parapets, window sills, doors and leading edges of decking.



5 Dulux AcraTex® Texture Coatings

AcraTex® high performance coating systems are designed to deliver long term protection and maintain their integrity for years to come.

Like all surfaces exposed to the elements, preventative maintenance will help keep it looking its best and preserve optimum performance over the life of the project.



5.1 Inspection

Regular inspection (minimum of yearly) is recommended for all coatings.

All joint sealants should be regularly checked to ensure no cracking is evident allowing water ingress. Particular attention should be given to areas where different substrates meet ie. above door openings & windows, where walls meet soffit lines and where fixings have been attached to walls. Control joints should also be inspected as part of maintenance inspections. Any deteriorated or damaged sealant should be removed and replaced as soon as it is apparent. The use of paintable PU or MS Sealants are recommended.

It is important to monitor areas that are heavily exposed to the elements such as parapets and balcony handrail tops. Due to the minimal slope these areas will tend to hold dirt and grime which can potentially lead to mould over time if not regularly washed. Any areas of water ponding must be addressed allowing water to drain away from coated surfaces.

Evidence of blistering, mould, efflorescence or excessive dirt pickup is typically indicative of excessive moisture and immediate action is recommended to identify and rectify the cause.

All observations made and actions taken should be recorded. In particular the date of first detection, together with the severity, location and percentage of the area affected should be noted.

5.2 Cleaning

Exterior surfaces should be cleaned with a low-pressure water jet (typically less than 450psi) using a wide fan angled to the wall (not perpendicular). The fan of the water jet should be kept a minimum of 30cm from the coated surface. Alternatively surfaces can be cleaned with a solution of mild detergent and warm water using a soft bristled brush or broom.

Localised grime or ingrained dirt should be removed by cleaning and light scrubbing with a solution of detergent and warm water. High Pressure Water blasting is not recommended.

Coastal exposure may require more regular cleaning due to build up of salts and moisture driven contamination.

5.3 Repairs

Before affecting any coating repair ensure the underlying cause has been identified and addressed.

Where sealant failure or movement cracking has occurred, temporary repairs can be made to cracks by filling them with paintable PU or MS sealant until the inspection has been completed and permanent repairs undertaken.

For minor repairs where full 3 Coat AcraTex systems are installed including weatherproofing AcraShield® or Elastomeric topcoat, cleaning and re-topcoating may be sufficient.

Where damage to the Texture Coating is identified making good (patching), priming and reinstatement of the Texture and Topcoat should be directed to a suitably qualified contractor.

In all cases to ensure uniformity of appearance it is important to plan over-coating or remedial works to natural break points in the facade (eg corner to corner or between control joints).

5.4 Recoating

Ultimate Life Cycle costs of the total facade are optimised when AcraTex AcraShield or Elastomeric (the final weatherproofing topcoats) are re-applied after 7-10 years. This ensures the integrity of the weather proofing system and provides the opportunity to address typical longer term building maintenance issues - such as building movement.

Preserving the investment is just one good reason, secondly a "10 year refresh" maintains the properties visual impact.

Typically a properly maintained system requires simply cleaning and reinstatement of the AcraShield or Elastomeric weatherproofing topcoats coat following attention to any maintenance or defects as detailed.

Refer to Dulux Duspec Product Data Sheets and Coating Specifications for full details

6 Commercial and Industrial Steelwork Coatings

6.1 Scope

The purpose of this schedule is to provide introductions for the inspection, cleaning and repair of protective coating systems applied to structural steel and non ferrous metal substrates.

6.2 Methods

References in this document to detailed methods of cleaning, preparation and treatment of surface contaminants, relate to the Duspec Surface Preparation Manual, which is available from Dulux (Ph. 132377) or www.duspec.com.au. Reference is also made to AS2312-2002 Section 10.

6.3 Inspection

Regular inspection (minimum of yearly) is recommended for all coatings. Areas of high traffic, high wear, or in the case for protective coatings, high moisture, surface contamination or physical damage may require more regular inspection. Areas for particular attention are angles, bolted connections including bolt holes, weld seams, stitch welding, sharp steel edges channels, web members of trusses, backs of double angles, stiffeners, gussets, gap joints or embedded steel in concrete and other areas where the coating may have been perforated or damaged by other trades during construction.

All observations made and actions taken should be recorded. In particular the date of first detection, together with the severity, location and percentage of the area affected should be noted.

Inspect to determine the degree of deterioration of existing coatings, rating them as either:

1. No film damage other than dirt and minor staining;
2. Soiled, stained, ingrained dirt, chalking or loss of gloss;
3. Minor film damage (cracking, flaking or erosion of topcoats) in small areas;
4. Minor corrosion where up to 0.5% of the base metal is showing signs of rusting; or
5. Major damage (corrosion over large areas) or excessive rusting.

6.4 Cleaning

Reliance on the cleansing effect of rain may not be sufficient to remove surface contaminants. A regularly cleaned surface not only looks better longer thus reducing the need for premature recoating but can often be easier to maintain into the future.

Areas nominated as category (1) or (2) above should be swept, dusted or vacuumed to maintain optimum appearance. (Floor and eye level horizontal surfaces should be treated daily). Use a soft cloth or soft bristled brushes where possible. Test mechanical methods to ensure they do not damage the finish.

Areas rated as category (3) soiled/stained/ingrained dirt should be washed with mild detergent solution using soft cloth or bristled brushes and thoroughly rinse clean with water and allow to dry.

Stubborn stains which resist mild detergent should be treated with domestic solvent cleansers. Spray directly on the stained coating



and allow penetrating for the recommended time. Rinse clean with fresh water.

Stains are easier to remove as soon after soiling as possible, to minimise penetration and setting in the coating. The longer a stain is left on the coating the greater the difficulty of removal and thus damage to the coating. This is particularly so with graffiti. Special graffiti resistant coatings may be able to assist if in an area prove to this form of contamination. Treat high visibility stains immediately rather than waiting for the next inspection and cleaning cycle.

Rust staining should be treated as detailed for category (5) damage. All evidence of rust staining must be paid attention to quickly. Rust staining is a demonstration of concerns in a nearby area that should be addressed.

6 Commercial and Industrial Steelwork Coatings continued

6.5 Repairs

Damaged areas (rated as category (4) or (5)) should be assessed for the cause of the damage to identify structural weaknesses or design faults. Early identification and elimination will minimise the cost of repair.

Having eliminated any design faults, proceed with spot repairs to areas showing damage (categories (4) and (5)). Ensure the surface around the damaged area is sound and clean. Feather the edge of the existing coating. For category (5) power tool clean thoroughly to remove then rust back to bare metal Refer AS/NZS 1627.2. All bare metal should then receive a spot prime of the original specified primer or other as designated by Dulux. (Note: Obtain all recommendations in writing). When spot priming overlap onto the existing feathered system. Apply topcoats as specified in the original system.

Should category (5) damage be on galvanised substrates an anti-corrosion primer may have to be used in addition to the original system. Refer to Dulux for specific recommendations.

For best results, use retained samples of original topcoats (if available) for repair (these can be obtained from the original contractor). Where original samples are not available, confirm the colour match on a sample board before proceeding with the repair. Spot repairs are difficult to marry in perfectly with the existing coating and should therefore be made as small as is necessary to minimise visual impact or continue the repair coating to the next natural change of direction.

Areas showing major damage (category (4)) should be cleaned, prepared and repainted with the original paint system. For areas of rusting, completely remove all traces of rust by power tool cleaning (not wire brushes) or in cases of excessive corrosion, abrasive blast cleaning may be appropriate. All edges must be feathered back to sound edge. All bare metal areas should be spot primed. The finish coats should be applied over the entire area to the nearest breaks (architectural) such as angles, joins etc. to ensure continuity of finish. Confirm the colour match on a sample board. Tolerances are slightly larger in areas which are not viewed in the same planes.

For all areas of major damage it is necessary to determine the reason for damage before rectification in order to obviate future rework for the same reasons. This may require a change of coating system depending on the circumstances, therefore, in cases where the reasons are obscure contact your Dulux representative.

Special note on MIO (micaceous iron oxide) coatings

Micaceous iron oxide (MIO) finishes vary in surface profile from very coarse and flat to smooth and glossy. Coarse finishes include Dulux Ferrodor 810, which is one pack enamel, and is the MIO finish most likely to be specified for broad wall areas. This finish itself is similar to medium to coarse sandpaper and can therefore be expected to be sensitive to marring and marking, and be difficult to clean.

The best way to treat dirt, however, is to do the following:

1. Use warm water, with a little detergent added.
2. Apply to the affected area with a soft bristle brush and use a circular motion to dislodge the dirt.
3. Do not use a sponge or cloth, as these would leave shreds on the surface!
4. Wash the area down with clean water and allow to dry.

As Dulux Ferrodor Standard 810 is simple to apply, and the existing (clean) MIO surface presents a good key for a new coating to adhere to, it is reasonable to suggest that areas exhibiting wear and tear simply be washed down and coated with a further single coat of Dulux Ferrodor 810.

7 Dulux Powder Coating

The effects of ultraviolet light, pollution, dirt, grime, and salt deposits can all accumulate on your powder coated surfaces over time. To extend the effective life of powder coatings, and protect any warranty requirements that may exist, a very simple regular maintenance program should be implemented for the removal of any residues.

As a general rule, cleaning should take place every six months. However, in areas where pollutants are more prevalent, especially in industrial or coastal regions, a cleaning program should be carried out more frequently (e.g. every three months).

1. To clean your powder coated surface:
2. Carefully remove any loose deposits with a wet sponge.
3. Use a soft brush (non abrasive) or cloth and a mild household detergent solution to remove dust, salt and other deposits.
4. Wash the area down with clean water and allow to dry.

Detergents that recommend the use of gloves when handling the detergent should be avoided, as this indicates that the detergent is harsh and therefore is unsuitable for cleaning your powder coated surfaces.

Although some strong solvents are recommended for removing sealants or other building residues, these may be harmful to the extended life of the powder coated surface

and should be avoided as the damage may not be visible immediately and may take up to twelve months to appear.

If paint splashes, sealants or other residue need to be removed, then methylated spirits turpentine or white spirits may be used, as none of these will adversely affect the powder coated surface.

Chalking due to ageing can be removed by lightly polishing using a soft cloth and automotive polish.

Note that the degree of chalking, and the long-term durability, defined as gloss retention and film integrity, are largely influenced by the type of powder coating used. Please refer to the table below for a comparison of warranty periods offered when the product is used by an approved Dulux Powder Coating Applicator.

Product	Description	Warranty period	Comments	Maintenance
DULUX Alphatec Plus	Standard polyester powder coating	Film Integrity – 5 years (Will chalk on UV exposure, but will maintain film integrity -i.e. not crack, flake or peel).	Standard colours readily available – no minimum quantity.	See Note D
DULUX Duralloy	NEW Standard polyester powder coating	Film Integrity – 5 years (Will chalk on UV exposure, but will maintain film integrity – i.e. not crack, flake or peel).	Standard colours readily available – no minimum quantity.	See Note D
DULUX Synthatec	Advanced polyester powder coating	Film Integrity – 10 years. Colour Retention – 5 years	Made to order – min. order 100kg = 700 m ²	See Note D
DULUX Duratec LX	Advanced polyester powder coating	Film Integrity –15 years. Colour Retention – 10 years	MTO – min. order 100 kg = 700 m ²	See Note D
DULUX Fluoraset FP	Fluoropolymer powder coating	Film Integrity –15 years. Colour Retention – 15 years	MTO – min. order 50 kg = 500 m ² . Metallics available.	See Note D

Note D: Repainting: Clean surface to remove all dirt, dust and other deposits, remove grease and oily stains with solvent, then abrade finely to provide a key. Take care not to damage the powder coating. Apply 1 coat of Luxepoxy 4 White Primer, then 1 or two coats of Weathermax HBR. The second coat may be necessary where application is limited to brush and roller and/or the Weathermax HBR is in a clear base colour.

8 Paint Maintenance Specification

Project

Location

Prepared for

Prepared by

Date

9 Project – Key Contacts

Contractor

Applicator

Mobile number

Dulux contact

Mobile number

Email

10 Paint Schedule

Interior Paint:		Colour:	
Exterior Paint:		Colour:	
Timber			