

NZDU02277 Dulux Metalshield FD Enamel Gloss on New Galvanised Steel [Interior]

Substrate and Substrate Preparation

Substrate Notes

This is a generic galvanised or zinc coated substrate. Please see the respective substrate for: non-ferrous metals, steel, precoated sheet steel. Other specialty metal substrates may also not be covered by this substrate.

GALVANISED STEEL (Zinc Coated Steel, Galvanised Iron)

Galvanised steel has been coated with a layer of zinc, either by dipping in molten zinc/zinc alloy, sprayed with molten zinc metal or electrodeposition of zinc. The zinc layer provides galvanic corrosion protection in much the same way that zinc rich primers do, by corroding in preference to the steel with which it is in contact. New galvanised iron, zinc and zinc-alloy surfaces should be examined for flux residues, light roll-forming oils, and foreign matter, all of which must be removed. Surfaces that show white rust or other corrosion products should be cleaned and treated appropriately. Zinc and zinc-alloy coated surfaces must not be primed with alkyd based paints due to a chemical reaction between the zinc and the alkyd resin.

Galvanised steel can be difficult to paint and protect because of the highly reactive nature of galvanising, particularly in coastal and chemical environments.

In many circumstances superior corrosion protection and superior compatibility with topcoats can be achieved by the use of Dulux zinc-rich, two-pack primer on mild steel instead of hot dipped galvanising. Please consult a Dulux Protective Coatings representative for specific requirements.

ZINC METAL SPRAY

Steel sprayed with molten zinc metal. The zinc layer provides corrosion protection in much the same way as hot dipped galvanised steel. There are fewer limitations on the size of objects that can be coated than with hot dip galvanisation, however, the porosity of the resulting surface will be higher.

Substrate Preparation Notes

DOMESTIC

CLEAN

Degrease surface with an alkaline detergent, such as Dulux Prep Wash, and rinse with fresh potable water until free of residue. Repeat until the surface is clean.

ABRADE

Abrade surface thoroughly using an abrasive nylon pad to remove gloss and to provide a suitable key for the coating system to adhere to. Any white rust should be removed by abrasion. Care must be taken so as not to damage the zinc layer. Wash down residues and allow the surface to dry.

PRIME

Apply a suitable, corrosion-inhibiting primer to any bare metal areas as soon as possible, before the surface oxidises or becomes contaminated.

RUST AFFECTED SUBSTRATES

1. Remove any loose or flaking coating back to a hard edge by scraper or power tool. Feather back all edges to remove ridges. Abrade surface of remaining coating to provide a suitable surface key for adhesion of the new coating system.
2. Using wire brush or power tool cleaning methods as appropriate, clean all bare metal surfaces and rust-affected areas. If the rust is severe, remove all paint, zinc coating and rust with abrasive blast, power wire brush or power tool cleaning. Remove filings, preferably by vacuum or compressed air. Ensure that the surface is clean, corrosion-free and dry immediately prior to application of primer coat.
3. Spot prime all bare metal with an appropriate, corrosion-inhibiting primer as soon as possible, before the surface oxidises or becomes contaminated. Overlap onto the sound adjacent coating by 25 to 50 mm.

INDUSTRIAL

CLEAN

Remove all surface contamination such as oil, grease or dirt by washing with an alkaline detergent, such as Dulux Prep Wash, and rinse with fresh potable water. Repeat until the surface is clean. A clean surface is indicated when the rinsing water wets out the surface instead of beading on the surface. Refer to relevant sections of AS1627.1 2003 Part 2.

PREPARE SURFACE

Dry abrasive "brush blast" clean (whip blast) the surface using a non-metallic abrasive such as garnet. The abrasive size and blast pressure shall be such that all zinc corrosion products and other surface contaminants are completely removed and that the surface is lightly profiled to provide a suitable key for the coating system to adhere to but with minimal reduction in the galvanised coating thickness (no more than 10 microns). If the item being painted is not suitable for brush blasting (eg zinc coated, sheet steel cladding) then use non-metallic abrasive sanding pads to remove any existing corrosion and provide a suitable key for coating adhesion. Note that this preparation method is likely to be less effective than brush blasting and should only be used where brush blasting is not suitable.

Remove all spent abrasive and residual dust using dry compressed air or, preferably, vacuum cleaning prior to application of the coating. Avoid handling blasted galvanised steel with bare hands.

REPAIR

If the zinc coating has been accidentally removed, spot repair all such areas using a zinc rich primer compatible with the coating system.

PRIME

Apply first or primer coat as soon as practical after preparation and before the surface oxidises or becomes re-contaminated.

RUST AFFECTED STEEL

1. Remove any loose or flaking coating back to a hard edge by scraper or power tool. Feather back all edges to remove ridges. Abrade surface of remaining coating to provide a suitable surface key for adhesion of the new coating system.
2. Using wire brush or power tool cleaning methods as appropriate, clean all bare metal surfaces and rust-affected areas in accordance with AS/NZ 1627:2 Class 2. Remove filings, preferably by vacuum or compressed air. Ensure that the surface is clean, corrosion-free and dry immediately prior to application of primer coat.
3. Spot prime all bare metal with an appropriate, corrosion-inhibiting primer as soon as possible, before the surface oxidises or becomes contaminated. Overlap onto the sound adjacent coating by 25 to 50 mm.

Coating System Summary

- 1st Coat Dulux Metalshield All Surface Primer
- 2nd Coat Dulux Metalshield FD Enamel Gloss
- 3rd Coat Dulux Metalshield FD Enamel Gloss

Coating System

1st Coat — Dulux Metalshield All Surface Primer

Coat Type
1st Coat

Datasheet
NZDU00456 Dulux Metalshield All Surface Primer

Read the full Datasheet details at [Dulux Metalshield All Surface Primer](#)

Application Methods



Airless Spray



Brush



Roller

	Min	Max	Recommended
Theoretical Spread Rate (m ² /L)	15	10	15
Wet Film Per Coat (microns)	60	100	60
Dry Film Per Coat (microns)	10	15	10
Recoat Time **	1 hour	Indefinite	

V.O.C. Level
<722 g/L

Meets ECNZ V.O.C. Requirements?
Not Applicable

SDS Number
52281

SDS Link

2nd Coat — Dulux Metalshield FD Enamel Gloss

Coat Type
2nd Coat

Datasheet
NZDU00511 Dulux Metalshield FD Enamel Gloss

Read the full Datasheet details at [Dulux Metalshield FD Enamel Gloss](#)

Application Methods



Air Spray





Airless Spray

	Min	Max	Recommended
Theoretical Spread Rate (m ² /L)			8.5

Wet Film Per Coat (microns)			105
Dry Film Per Coat (microns)			40
Recoat Time **	6 Hours	Indefinite	
Meets ECNZ V.O.C. Requirements? Not Applicable			

3rd Coat — Dulux Metalshield FD Enamel Gloss

Coat Type 3rd Coat		Datasheet NZDU00511 Dulux Metalshield FD Enamel Gloss	
Read the full Datasheet details at Dulux Metalshield FD Enamel Gloss			
Application Methods			
 Air Spray		 Airless Spray	
	Min	Max	Recommended
Theoretical Spread Rate (m²/L)	<input type="text"/>	<input type="text"/>	8.5
Wet Film Per Coat (microns)	<input type="text"/>	<input type="text"/>	105
Dry Film Per Coat (microns)	<input type="text"/>	<input type="text"/>	40
Recoat Time **	6 Hours	Indefinite	<input type="text"/>
Meets ECNZ V.O.C. Requirements? Not Applicable			

Coating System Notes

* Theoretical Coverage is the area is the area covered by 1 Litre of material at the specification 'Dry Film Thickness' without a loss to a smooth and non porous surface.

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The correct colour or colour match is the responsibility of the applicator. Colours will change over time and Dulux does not guarantee that the same colour newly mixed will match a colour applied earlier which has been subjected to weathering or other change elements. No product colour is guaranteed against colour change.

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WHERE LEAD MAY BE PRESENT: The asset manager is responsible for verifying the presence of lead and determining whether to remove or encapsulate the lead. If lead is present, the work must be done in strict accordance with AS/ NZS 4361 Parts 1 and 2 and Worksafe Australia or New Zealand guidelines.