# NZDU02276 Dulux Metalshield FD Enamel Gloss on Painted Steel [Interior]

## Substrate and Substrate Preparation

### Substrate Notes

This is a generic steel or iron substrate. Please see the respective substrate for: non-ferrous metals, galvanised steel, precoated sheet steel. Other specialty metal substrates may also not be covered by this substrate.
Uncoated ferrous metal is very unstable and will readily react with water and oxygen to form oxides (rust). The presence of salts will speed up rust formation.
Millscale is a shiny, bluish iron oxide produced by heat and pressure during manufacture and is often mistaken for shop primer or clean steel. Millscale is very difficult to remove by hand and should be abrasive blast cleaned off. The presence of millscale is responsible for a significant proportion of coating failures.

MILD STEEL
Mild steel contains less than 0.25% carbon. New mild steel surfaces should be inspected for millscale, rust, sharp edges, burr marks and welding flux, forming or machine oils, salts, chemical contamination or mortar splashes on them, all of which which must be removed.

CAST IRON
Cast iron is a carbon-steel alloy containing substantial amounts of graphite (usually above 2.5%) which has been cast and therefore does not contain welds.

BLACK STEEL
Ferrous metal partially protected by a thin outer layer of black iron oxide (Magnetite). Rust protection offered with black steel is minimal and is often treated with an oil coating during manufacture to inhibit the rust process.

WROUGHT IRON
A historic grade of iron, with a low carbon content (0.1-0.25%) but significant levels of impurities. It has little use today and has been replaced by mild steel.

### Substrate Preparation Notes

DOMESTIC STEELWORK
CLEAN
Remove all surface contamination such as oil, grease or dirt by alkaline detergent solution wash, such as Dulux Prep Wash, using stiff bristle brush if necessary, and rinse with fresh potable water. Repeat until the surface is clean. Alternatively, the surface can be cleaned by water blasting.

ASSESS SUITABILITY
Inspect to determine the degree of deterioration of existing coatings. Identification of the existing coating is also very helpful in determining the repaint system. Check coating adhesion using the cross-cut adhesion test, carried out in various locations.

REPAIR OF SURFACE DEFECTS
Remove all coatings that had failed adhesion test, or that are cracking, peeling, flaking or otherwise unsound by sanding, power sanding, scraping, wire brushing or burning off as appropriate. Where coating is removed back to a well-adhered, hard edge, feather the edges of the coating to remove visual ridges. Remove all residual loose matter resulting from the cleaning process by brush, vacuum, or clean, compressed air.

ABRADE SURFACE
Where the existing coating passes adhesion test, abrade surface to thoroughly de-gloss the surface and to provide a suitable surface for re-coating. Ensure all dust is removed prior to continuing.

PRIME
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.

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. 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.

INDUSTRIAL
CLEAN
Wash and degrease all surfaces to be coated in accordance with AS1627.1 with a free-rinsing, alkaline detergent, such as Dulux Prep Wash. Wash with fresh potable water to remove all detergent, salts and residues are removed. Refer to AS 3894.6 methods A&D.

ASSESS SUITABILITY
Perform adhesion test as described in relevant sections of AS 3894.9. If existing coating fails adhesion test, it must be removed.

REPAIR AND PREPARATION OF SURFACE

Abrade the surface to remove gloss and chalkiness, to achieve a smooth, uniform surface and to provide a good key for the new coating system. Dust off. Complete removal of heavy chalky build-up may require wire brush or power tool cleaning back to sound paint layers before abrading.

PRIME
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.

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

- Spot Primer — Dulux Metalshield All Surface Primer
- 1st Coat — Dulux Metalshield FD Enamel Gloss
- 2nd Coat — Dulux Metalshield FD Enamel Gloss

## Coating System

### Spot Primer — Dulux Metalshield All Surface Primer

| Coat Type | Datasheet |
|---|---|
| **Spot Primer** | **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 (m²/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 | Meets ECNZ V.O.C. Requirements? |
|---|---|
| **<722 g/L** | **Not Applicable** |

| SDS Number | SDS Link |
|---|---|
| **52281** | |

### 1st Coat — Dulux Metalshield FD Enamel Gloss

| Coat Type | Datasheet |
|---|---|
| **1st Coat** | **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) | | | 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**

## 2nd Coat — Dulux Metalshield FD Enamel Gloss

| Coat Type | Datasheet |
|---|---|
| **2nd Coat** | **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) | | | 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**

Coating System Notes
* Theorectical Coverage is the area is the area covered by 1 Litre of material at the specifiaction 'Dry Film Thickness' without a loss to a smooth and non porous surface.

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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.