

DULUX Duralloy® FG

PRODUCT CODE 959 Line

Data Sheet No. AUDP1559

APPROVALS

Description

Duralloy® FG is a tough thermosetting polyester powder coating with decorative and durability characteristics, suitable for applications over zinc coated galvanised substrates and castings where excellent overall performance is required. The importance of galvanised steel as a substrate in the Australasian market is a recognised factor and Duralloy® FG has been developed to be suitable for application to the wide range of galvanised steels available. Duralloy® FG shows particularly good flow characteristics along with the excellent tolerance to the micro porosity present in many galvanised steels and diecasting.

Features

Excellent flow
Tough coating
Film integrity
No solvents or emissions
Easy application

Benefits

Good out gassing resistance to galvanised steel and diecasting
Suitable for various applications
Long intact life of coating
Less waste and pollution to the environment
Consistency of finish

Uses

Duralloy® FG has a multitude of uses over castings, zinc coated and galvanised, and can also be used on steel and aluminium substrates. Examples include: castings and pool fencing, but also include bicycles, garden tools, lawn mowers, architectural finishes, exterior furniture and automotive components.

Performance Guide

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| Weather | Good resistance to weathering. Suitable for outdoor applications. | Salt | Good.< 3mm adhesion loss at scribe after 250 hours salt spray on pre-treated steel, 1000 hours on pre-treated aluminium. |
| Heat | Excellent resistance to 120°C continuous service conditions. | Water | Good resistance to 38°C/100% humidity for 1000 hours on pre-treated aluminium. |
| Solvent | Resistant to alcohol and white spirits. | Abrasion | Very good resistance to abrasion. |
| Acid | Resistant to spills of dilute acid. Avoid contact. | Alkali | Resistant to spills of dilute alkali. Avoid contact. |

Typical Properties and Application Data

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|-----------------------------|--|---------------------------|---|
| Gloss Level | 25 - 98% at 60°, as required | Spread Rate | 12.5 sqm/kg |
| Components | 1 | Colour | A range of stock and made to order solid colours. |
| Shelf life | 12 months when stored below 30°C/dry conditions. | Pot Life | Not applicable |
| Wet film per coat | Min 50 Max 120 Recom 80 µm | Clean Up | Dust or vacuum loose powder. Avoid use of compressed air. |
| Dry film per coat | Min 50 Max 120 Recom 80 µm | Application Method | Electrostatic spray. |
| Specific Gravity | 1.3 - 1.7 @ colour | Flexibility | Excellent < or = 160 inch/lb |
| Pencil Hardness | Min H | Knoop Hardness | Average 15 |
| Cross hatch adhesion | No removal | | |

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Application Guide**Surface Preparation**

Surfaces should be prepared according to appropriate standards such as AS3715-2002, BS6496, BS6497 (available from Standards Australia or Standards New Zealand offices).

All surfaces should be degreased and pre-treated for optimal performance.

Suitable pre-treatment includes:

Aluminium - Yellow chromate or green chromate/phosphate (refer AS3715-2002 and/or BS6496)

Ferrous metals - Zinc phosphate or Iron phosphate (refer BS6497)

Zinc Coated Metals (eg. galvanising) - Zinc Phosphate or chromate (refer BS6497)

Stainless Steel - Suitable metal blast. Recommended maximum blast profile of 25 micron.

Application Procedure and Equipment

Electrostatic spray.

1a) For fluidised bed, ensure uniform fluidisation of powder. Fluidised powder should resemble simmering liquid. Aged or compacted powder may require pre-conditioning for several minutes to fluidise evenly.

1b) For box feeders, ensure probe is fully inserted in powder and operated as per manufacturers recommendations.

2. Apply by electrostatic spray.

3. Cure as per recommendations outlined above.

4. Test for cure of the coating by contact with a drop of Corsol PGMA (available from Dulux Powder Coatings) for 30 seconds. Surface should be wiped dry and immediately checked for softening. Only slight surface softening should occur.

5. Most hot dipped galvanised steels have gas entrapped in the zinc layer. Unless this is properly treated the gas may be released during the curing of the powder coating, leading to an unacceptable appearance and potentially reduced service life.

To obtain a more reliable result, the inclusion of a degassing stage as a routine part of the powder coating process is recommended.

The recommended degassing procedure is:

Heat the substrate to a temperature at least 10°C above the powder coating curing temperature to be used, and maintain this temperature for at least 7 minutes.

The degassing process will minimise the incidence of pinholes in the cured film.

Notes

Light colours may require a higher minimum film build for optimum coverage and colour consistency.

Theoretical spreading rate at recommended film thickness

A coverage rate of 8 - 10m²/kg corresponds to 80micron cured film thickness assuming no loss. Practical spreading rates will vary due to such factors as method and conditions of application and surface profile and texture.

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As a general rule, cleaning of externally located powder coating surfaces must take place every six months. Where salts/pollutants are more prevalent such as seaside and industrial areas, a cleaning program should be carried out more frequently.

THREE STEPS TO CLEANING POWDER COATED SURFACES

1. Remove loose deposits with a wet sponge (avoid scratching the surface by dry dusting).
2. Using a soft clean cloth and a mild detergent in warm water, clean the powder coating to remove dust, salt or other deposits.
3. Always rinse after cleaning with fresh water to remove any remaining detergent.

WARNING:

In some cases, strong solvents recommended for thinning various types of paints and also for cleaning up mastics/sealants are harmful to the extended life of the powder coated surface. These solvents should not be used for cleaning purposes. If paint splashes or sealants/mastics need to be removed then the following solvents can be used safely: Methylated Spirits, Turpentine, White Spirits, Ethyl Alcohol, Isopropanol.

Health and Safety

In the case of emergency please call 1800 033 111

Precautions and Limitations

As a result of possible wide application variations and stoving conditions, some products and colours may show variation between Dulux Powder Coatings prepared samples and production applied material. Therefore, it is the applicator and/or their customers responsibility to ensure the product conforms to their requirements.

For optimum performance ensure recommended dry film thickness is obtained.

Not recommended for use in highly corrosive environments such as severe marine or industrial locations.

Not recommended for components which are exposed to constant temperatures exceeding 120°C.

Transport and Storage

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| Pack A | 959 Line | | |
| Sizes | 20 Kg | Weight | 20 Kg |
| Shipment Name | Not dangerous goods. No special transport requirements. | | |

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