

DUREBILD® STE MIO

Surface Tolerant Micaceous Iron Oxide Epoxy Coating

PC 565

- FEATURES**
- SUPERIOR SURFACE WETTING PROPERTIES AND CORROSION RESISTANCE
 - HIGH PERFORMANCE BARRIER PROTECTION FOR NEW OR EXISTING STEEL
 - IDEAL MAINTENANCE COATING OVER MOST WELL ADHERED AGED COATINGS
 - MIO PIGMENTATION PROVIDES IMPROVED WEATHERABILITY PROPERTIES
 - SELF PRIMING FINISH

USES DUREBILD® STE MIO has been developed specifically for Australasian conditions using advanced epoxy technology. It is principally used as a high-performance maintenance coating over hand, power tool or high-pressure water cleaned surfaces where blasting is impractical or not allowed. This coating can also be used for new work as an intermediate or topcoat. The MIO pigment in the formula provides additional barrier protection over abrasive blast cleaned steel in fresh and salt-water immersion. DUREBILD® STE MIO can be topcoated with a wide range of coating types and is available with a cold cure hardener that is bloom free.

SPECIFICATIONS Approved to APAS 2977, AS/NZS 3750.1

RESISTANCE GUIDE

| | | | |
|------------------------|---|-----------------|--|
| WEATHERABILITY | Will yellow with time and chalk on exterior exposure, although the MIO pigment reduces chalking. Neither yellowing nor chalking detracts from protective properties of the coating. Use a weatherable pigmented topcoat if appearance is important. | SOLVENTS | Resists splash and spillage of most hydrocarbon solvents, refined petroleum products & most alcohols. |
| HEAT RESISTANCE | Up to 120°C dry heat. | WATER | Excellent resistance to fresh and salt water. Aluminium containing colours are not suitable for immersion. |
| SALTS | Excellent resistance to neutral and alkali salts. Aluminium not recommended for alkaline conditions. | ALKALIS | Natural Grey suitable for splash and spillage of strong alkalis. Aluminium versions are not suitable. – see PRECAUTIONS. |
| ACIDS | Natural Grey suitable for splash and spillage of mild acids but aluminium versions are not – see PRECAUTIONS. | ABRASION | Good when fully cured. |

TYPICAL PROPERTIES AND APPLICATION DATA (STANDARD HARDENER)

| | | | | | |
|-------------------------|---|------------------------------------|--|------|-------------|
| CLASSIFICATION | Surface Tolerant Epoxy MIO | APPLICATION CONDITIONS | | | |
| FINISH | Semi Gloss | | Min | Max | |
| COLOUR | Natural Grey, Mid Grey, Pipeline Grey (MTO) and St Enoch Grey (MTO). | Air Temp. | 10°C | 45°C | |
| COMPONENTS | Two | Substrate Temp. | 10°C | 45°C | |
| VOLUME SOLIDS | 84% (Natural Grey) | Relative Humidity | | 85% | |
| VOC LEVEL | <220 g/L (Natural Grey) | Concrete Moisture | | <10% | |
| FLASH POINT | 41°C | COATING THICKNESS (MICRONS) | | | |
| POT LIFE | 60 Minutes (4 litre kit, 25°C) | | Min | Max | Recommended |
| MIXING RATIO V/V | Part A : 4 Part B : 1 | Wet film per coat (µm) | 120 | 250 | 150 |
| THINNER | 920-08925 Dulux® Epoxy Thinner | Dry film per coat (µm) | 100 | 210 | 125 |
| PRODUCT CODE | 775-00805 Natural Grey 775-63006 Mid Grey 775-89962 Pipeline Grey (MTO) 775-00806 St Enoch Grey (MTO) 976-84539 Standard Hardener 976-84685 Cold Cure Hardener | SUITABLE SUBSTRATES | Prepared rusty steel, aged tightly adhering coatings, prepared concrete, aluminium and galvanised steel. | | |
| | | PRIMERS | Zincanode® 402 | | |
| | | APPLICATION METHODS | Brush, roller, conventional or airless spray | | |

DRYING CHARACTERISTICS AT 125 µm DRY FILM THICKNESS* (STANDARD HARDENER)

| Temperature | Humidity | Touch | Handle | Full Cure | OVERCOAT | |
|-------------|----------|----------|----------|-----------|----------|------------------|
| | | | | | Min | Max ¹ |
| 10° C | 50% | 14 Hours | 36 Hours | 7 Days | 36 Hours | 4 Weeks |
| 15° C | 50% | 10 Hours | 24 Hours | 7 Days | 24 Hours | 4 Weeks |
| 25° C | 50% | 6 Hours | 14 Hours | 7 Days | 14 Hours | 4 Weeks |

*These figures are a guide only, as ventilation, film thickness, humidity, thinning and other factors will influence the rate of drying.

¹If the maximum overcoat interval is exceeded then the surface MUST be abraded to ensure maximum intercoat adhesion.

¹NOTE: Figures shown are for non-immersion conditions. When used for immersion conditions the maximum overcoat interval is 3 days. The coating MUST be fully cured and completely solvent free prior to being placed under immersion conditions. Refer to PRECAUTIONS section.

SPREADING RATE 6.7 square metres per litre equals 125 µm dry film thickness

WITH STANDARD HARDENER ASSUMING NO LOSSES

NOTE: Practical spreading rates will vary depending on such factors as application method, ambient conditions and surface porosity and roughness.

DUREBILD® STE MIO

COLD CURE HARDENER

COATING THICKNESS (MICRONS)

| | Min | Max | Recommended |
|-------------------------|--------------------------------|-----|-------------|
| Wet film per coat (µm) | 120 | 250 | 150 |
| Dry film per coat (µm) | 100 | 210 | 125 |
| SOLIDS BY VOLUME | 84% (Natural Grey) | | |
| VOC LEVEL | <210 g/L (Natural Grey) | | |
| FLASH POINT | >23°C | | |
| POT LIFE | 60 Minutes (4 litre kit, 25°C) | | |

APPLICATION CONDITIONS

| | Min | Max |
|--------------------------------------|-----|------|
| Air Temperature | 5°C | 45°C |
| Substrate Surface Temperature | 5°C | 45°C |
| Relative Humidity | | 85% |
| Concrete Moisture Content | | <10% |

DRYING CHARACTERISTICS AT 125 µm DRY FILM THICKNESS* (COLD CURE HARDENER)

OVERCOAT

| Temperature | Humidity | Touch | Handle | Full Cure | Min | Max ¹ |
|-------------|----------|----------|----------|-----------|----------|------------------|
| 5° C | 50% | 14 Hours | 28 Hours | 7 Days | 28 Hours | 4 Weeks |
| 10° C | 50% | 13 Hours | 24 Hours | 7 Days | 24 Hours | 4 Weeks |
| 15° C | 50% | 12 Hours | 18 Hours | 7 Days | 18 Hours | 4 Weeks |
| 25° C | 50% | 6 Hours | 9 Hours | 7 Days | 9 Hours | 4 Weeks |

*These figures are a guide only, as ventilation, film thickness, humidity, thinning and other factors will influence the rate of drying.

¹If the maximum overcoat interval is exceeded then the surface **MUST** be abraded to ensure maximum intercoat adhesion.

Use of fast or low temperature hardeners may result in increased yellowing and a reduction of gloss level.

SPREADING RATE

WITH COLD CURE
HARDENER ASSUMING NO
LOSSES

6.7 square metres per litre equals 125 µm dry film thickness

NOTE: Practical spreading rates will vary depending on such factors as application method, ambient conditions and surface porosity and roughness.

TYPICAL SYSTEMS

This is a guide only and not to be used as a specification. Your specific project needs must be discussed with a Dulux Protective Coatings Consultant.

| SURFACE | ENVIRONMENT | PREPARATION GUIDE | SYSTEM | DFT (µm) |
|--------------------------------|--|---|---|----------------------------|
| STEEL – NEW | Very high corrosivity (AS2312.1 Cat C5) Exceeds System PUR 5 | Abrasive blast clean AS1627.4 Class 2.5 | 1 st Coat Zincanode® 402 2 nd Coat Durebild® STE MIO 3 rd Coat Weathermax® HBR | 75 µm 200 µm 100 µm |
| STEEL – MAINTENANCE | Coastal | Power tool clean AS1627.2 St 3 or Abrasive blast AS1627.4 Class 2 | Spot Prime 1 st Coat Durebild® STE MIO 2 nd Coat Durebild® STE MIO Weathermax® HBR | 125 µm 125 µm 100 µm |
| STEEL NEW OR MAINTENANCE | Immersion – Salt water or fresh water System EHB7 | Abrasive blast clean AS1627.4 Class 3.0 | 1 st Coat Durebild® STE MIO 2 nd Coat Durebild® STE MIO | 150 µm 150 µm |
| GALVANISED STEEL | Exterior | Degrease and whip blast | 1 st Coat Durebild® STE MIO 2 nd Coat Durebild® STE MIO | 125 µm 125 µm |
| CONCRETE | Exterior | Remove release agents and other surface contaminants | 1 st Coat Durebild® STE MIO 2 nd Coat Weathermax® HBR | 125 µm 100 µm |
| ALUMINIUM | Exterior/Interior | Clean, degrease and abrade surface | 1 st Coat Durebild® STE MIO | 125 µm |

NOTE: If application is by brush or roller, additional coats will be necessary to achieve the minimum DFT

DUREBILD® STE MIO

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|----------------------------|---|---------------|----------------|-------------------------|---------------------------|------------------|----------------------------|
| SURFACE PREPARATION | <p>Steel: Round off all rough welds, sharp edges and remove weld spatter. Remove grease, oil and other contaminants in accordance with AS1627.1. Degrease with Gamlen CA No. 1 (a free-rinsing, alkaline detergent) according to the manufacturer's written instructions and all safety warnings. Abrasive blast clean to a minimum of AS1627.4 Class 2.5.</p> <p>Immersed steel: Abrasive blast cleaned to AS1627.4 Class 3. Remove all dust by brushing or vacuum cleaning.</p> <p>Steel where abrasive blast cleaning is not viable: Rust, mill scale, oxide deposits and old paint films on metal surfaces must be removed by power tool cleaning according to AS1627.2. Coating performance is proportional to the degree of surface preparation.</p> <p>Concrete: Concrete should be at least 28 days old before coating. Remove all laitance, form release, curing compounds, oil, grease and other surface contaminants. Fill any large cracks or voids using Luxepoxy Filler.</p> | | | | | | |
| APPLICATION | Mix each can thoroughly using a power mixer until the contents are uniform. Mix the contents of both packs together thoroughly using a power mixer and allow to stand for 10 minutes. Remix thoroughly before using and continue mixing during application. | | | | | | |
| BRUSH/ROLLER | Apply even coats of the mixed material to the prepared surface. When brushing and rolling additional coats may be required to attain the specified thickness. | | | | | | |
| CONVENTIONAL SPRAY | <p>Thinning is not normally required, however a small amount (5% or less by volume) of Dulux® Epoxy Thinner (920-08925) can be added. Ensure paint is regularly agitated during application to prevent separation.</p> <p>Typical Set-up</p> <table border="0"> <tr> <td>Graco AirPro:</td> <td>1.8mm (239542)</td> </tr> <tr> <td>Pressure at Triton 308:</td> <td>65-100 kPa (10-15 p.s.i.)</td> </tr> <tr> <td>Pressure at Gun:</td> <td>385-420 kPa (55-60 p.s.i.)</td> </tr> </table> | Graco AirPro: | 1.8mm (239542) | Pressure at Triton 308: | 65-100 kPa (10-15 p.s.i.) | Pressure at Gun: | 385-420 kPa (55-60 p.s.i.) |
| Graco AirPro: | 1.8mm (239542) | | | | | | |
| Pressure at Triton 308: | 65-100 kPa (10-15 p.s.i.) | | | | | | |
| Pressure at Gun: | 385-420 kPa (55-60 p.s.i.) | | | | | | |
| AIRLESS SPRAY | Standard airless spray equipment such as a Graco Xtreme 45:1 or 56:1 with a fluid tip of 17–21 thou (0.43-0.53mm) and an air supply capable of delivering 550-690 kPa (80 -100 psi) at the pump. Thinning is not normally required but up to 50ml/litre of Dulux® Epoxy Thinner (920-08925) may be added to aid application. Ensure paint is regularly agitated during application to prevent settling of the MIO pigment. | | | | | | |
| PRECAUTIONS | This is an industrial product designed for use by experienced Protective Coating applicators. Where conditions may require variation from the recommendations on this Product Data Sheet contact your nearest Dulux® Consultant for advice prior to painting. Do not apply in conditions outside the parameters stated in this document without the express written consent of Dulux® Australia. Freshly mixed material must not be added to material that has been mixed for some time. Do not apply at temperatures below 10°C when using standard hardener or below 5°C when using Cold Cure hardener. Do not apply at relative humidity above 85% or when the surface is less than 3°C above the dewpoint. When used for immersion conditions the maximum overcoat interval is 3 days at 25°C. The coating MUST be fully cured and solvent free prior to being placed under immersion conditions. For best results in water immersion conditions replace Dulux® Epoxy Thinner (920-08925) with Dulux® CR Reducer (965-63020). DO NOT use Aluminium containing colours (ie Mid Grey and St Enoch Grey) for immersion or for exposure to acidic or alkaline conditions. DO NOT use Cold Cure hardener in immersion conditions. This product is not a decorative coating, and colour variations will occur due to different application techniques. Coatings containing micaceous iron oxide are prone to marbling but this will not affect the protective properties. DO NOT use as a primer over galvanised steel when using Cold Cure hardener as delamination can occur. Use of fast or low temperature hardeners may result in increased yellowing and a reduction of gloss level. | | | | | | |
| CLEAN UP | Clean all equipment with Dulux® Epoxy Thinner (920-08925) immediately after use. | | | | | | |
| OVERCOATING | Degrease with Gamlen CA 1 according to the data sheet. Test adhesion of existing coating by standard cross hatch adhesion test. If the coating fails, remove it. High-pressure water wash at 8.3 to 10.3 MPa (1,200-1,500 p.s.i.) to remove chalk and dust. Abrade surface to provide a good key for the new coating. Epoxies must be abraded if recoated outside the recoat window. | | | | | | |
| SAFETY PRECAUTIONS | Read Data Sheet, SAFETY DATA SHEET and any precautions on container labels. SAFETY DATA SHEET is available from Customer Service (13 23 77) or www.duluxprotectivecoatings.com.au | | | | | | |
| STORAGE | Store as required for a flammable liquid Class 3 in a bunded area under cover. Store in well-ventilated area away from sources of heat or ignition. Keep containers closed at all times. | | | | | | |
| HANDLING | As with any chemical, ingestion, inhalation and prolonged or repeated skin contact should be avoided by good occupational work practice. Eye protection approved to AS1337 should be worn where there is a risk of splashes entering the eyes. Always wash hands before smoking, eating, drinking or using the toilet. | | | | | | |
| USING | Use with good ventilation and avoid inhalation of spray mists and fumes. If risk of inhalation of spray mists exists, wear combined organic vapour/particulate respirator. When spraying, users must comply with their respective State Spray Painting Regulations. | | | | | | |
| FLAMMABILITY | This product is flammable. All sources of ignition must be eliminated in, or near the working area. DO NOT SMOKE. Fight fire with foam, CO ₂ or dry chemical powder. On burning will emit toxic fumes. | | | | | | |
| WELDING | Avoid inhalation of fumes if welding surfaces coated with this paint. Grind off coating before welding. | | | | | | |

| COMPANY INFORMATION | | PACKAGING, TRANSPORT AND STORAGE | |
|--|---|----------------------------------|--|
| Dulux Protective Coatings a division of | | PACKAGING | Available in 15 litre packs |
| DuluxGroup (Australia) Pty Ltd 1956 Dandenong Road, Clayton 3168 A.B.N. 67 000 049 427 | DuluxGroup (New Zealand) Pty Ltd 150 Hutt Park Road, Lower Hutt, NZ A.B.N. 55 133 404 118 | TRANSPORTATION WEIGHT | 1.73 kg/litre (Average of components) |
| | | DAANGEROUS GOODS | Part A: Class 3 UN 1263 Part B: Class 8,3 UN 2734 |

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