

DUREMAX[®] GPE MIO

General Purpose Micaceous Iron Oxide Epoxy Coating

PC 254

- FEATURES**
- MICACEOUS IRON OXIDE PIGMENTATION FOR ADDED BARRIER PROTECTION
 - COMPATIBLE OVER MOST TYPES OF PROPERLY APPLIED & TIGHTLY ADHERING COATINGS
 - EASE OF APPLICATION – SPRAY, BRUSH, ROLLER
 - RANGE OF HARDENERS FOR VARYING CLIMATIC CONDITIONS
 - GOOD ABRASION RESISTANCE

USES DUREMAX[®] GPE MIO is a high performance protective coating locally developed specially for Australasian conditions using the latest epoxy technology. DUREMAX[®] GPE MIO is enhanced with micaceous iron oxide pigment for the protection of structures exposed to severe environments such as chemical plants, offshore platforms, refineries, ship loaders, coal wash plants etc.

DUREMAX[®] GPE MIO is suitable for use on steel, galvanising and concrete, is compatible over inorganic zinc and epoxy primers, and can be topcoated with a wide range of coating types.

SPECIFICATIONS

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 topcoat if required for appearance.	SOLVENTS	Resists splash and spillage of most hydrocarbon solvents, refined petroleum products and most common alcohols
HEAT RESISTANCE	Up to 120°C dry heat	WATER	Excellent resistance to fresh and salt water but not suitable for immersion
SALTS	Excellent resistance to neutral salts	ALKALIS	Not suitable for alkaline conditions unless topcoated
ACIDS	Not suitable for acid conditions unless topcoated	ABRASION	Good when fully cured.

TYPICAL PROPERTIES AND APPLICATION DATA (STANDARD HARDENER)

CLASSIFICATION	General purpose epoxy MIO coating		APPLICATION CONDITIONS			
FINISH	Semi Gloss			Min	Max	
COLOUR	MIO Mid Grey		Air Temp.	10°C	45°C	
			Substrate Temp.	10°C	45°C	
			Relative Humidity	85%		
			Concrete Moisture	<10%		
COMPONENTS	Two		COATING THICKNESS (MICRONS)			
VOLUME SOLIDS	69%			Min	Max	Recommended
VOC LEVEL	<270 g/L		Wet film per coat (µm)	145	290	180
FLASH POINT	4°C		Dry film per coat (µm)	100	200	125
POT LIFE	3 – 4 hours (4 litre kit, 25°C)		SUITABLE SUBSTRATES	Blast cleaned steel, prepared concrete, aluminium and galvanised steel		
MIXING RATIO V/V	Part A : 4	Part B : 1	PRIMERS	Dulux [®] two pack zinc rich primers		
THINNER – BRUSH	920-08925	Dulux [®] Epoxy Thinner	TOPCOATS	Specified Dulux [®] topcoats		
THINNER – SPRAY	920-81942	Duthin [®] 450	APPLICATION METHODS	Conventional, airless spray or air assisted spray		
PRODUCT CODE	780-63006	MIO Mid Grey				
	976-84577	Standard Hardener				
	976-84741	Fast Cure Hardener				
	976-84892	Quickturn [®] Hardener				

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

Temperature	Humidity	Touch	Handle	Full Cure	OVERCOAT	
					Min	Max ¹
10° C	50%	16 Hours	28 Hours	7 Days	28 Hours	4 Weeks
15° C	50%	12 Hours	20 Hours	7 Days	20 Hours	4 Weeks
25° C	50%	4 Hours	10 Hours	7 Days	8 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.

SPREADING RATE

with Standard Hardener assuming no losses

5.5 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, surface porosity and roughness.

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FAST CURE HARDENER

COATING THICKNESS (MICRONS)

	Min	Max	Recommended
Wet film per coat (µm)	137	274	170
Dry film per coat (µm)	100	200	125

SOLIDS BY VOLUME	73%
VOC LEVEL	<240 g/L
FLASH POINT	>23°C
POT LIFE	2 hours (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*

Temperature	Humidity	Touch	Handle	Full Cure	OVERCOAT	
					Min	Max ¹
5° C	50%	9 Hours	18 Hours	7 Days	18 Hours	4 Weeks
10° C	50%	6 Hours	14 Hours	7 Days	14 Hours	4 Weeks
15° C	50%	5 Hours	10 Hours	7 Days	10 Hours	4 Weeks
25° C	50%	2.5 Hours	6 Hours	7 Days	6 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.

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

SPREADING RATE

with Fast Cure Hardener
assuming no losses

5.8 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, surface porosity and roughness.

QUICKTURN® HARDENER

COATING THICKNESS (MICRONS)

	Min	Max	Recommended
Wet film per coat (µm)	140	280	175
Dry film per coat (µm)	100	200	125

SOLIDS BY VOLUME	71%
VOC LEVEL	<250 g/L
FLASH POINT	>23°C
POT LIFE	90 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*

Temperature	Humidity	Touch	Handle	Full Cure	OVERCOAT	
					Min	Max ¹
5° C	50%	7 Hours	14 Hours	7 Days	14 Hours	4 Weeks
10° C	50%	5 Hours	9 Hours	7 Days	9 Hours	4 Weeks
15° C	50%	3 Hours	5 Hours	7 Days	5 Hours	4 Weeks
25° C	50%	90 Minutes	3 Hours	7 Days	3 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.

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

SPREADING RATE

with Quickturn® Hardener
assuming no losses

5.7 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, surface porosity and roughness.

DUREMAX® GPE MIO

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) System PUR5	Abrasive blast clean AS1627.4 Class 2.5	1 st Coat Zincanode® 402 2 nd Coat Duremax® GPE MIO 3 rd Coat Weathermax® HBR	75 µm 200 µm 100 µm
STEEL – NEW	Very high corrosivity (AS2312.1 Cat C5) System EHB6	Abrasive blast clean AS1627.4 Class 2.5	1 st Coat Zincanode® 402 2 nd Coat Duremax® GPE MIO	75 µm 125 µm
STEEL – NEW	Interior hidden from view	Abrasive blast clean AS1627.4 Class 2.5	1 st Coat Duremax® GPE MIO	200 µm
GALVANISED IRON, ALUMINIUM	Exterior/Interior	Clean, degrease and abrade or whip blast surface	1 st Coat Duremax® GPE MIO	150 µm

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

SURFACE PREPARATION	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 1 according to the data sheet and label. Abrasive blast clean to a minimum of AS1627.4 Class 2.5. Galvanised steel: Round off all rough welds, sharp edges, and zinc dags and remove weld spatter. Remove grease, oil and other contaminants in accordance with AS1627.1. Whip blast, taking care not to damage the galvanising layer. Remove all dust by vacuum cleaning.
APPLICATION	Mix each pack thoroughly using a power mixer until the contents are uniform. Mix both packs together thoroughly using a power mixer and allow to stand for 10 minutes. Remix thoroughly before and 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	Thinning is not normally required, however a small amount (5% or less by volume) of Dulux® Epoxy Thinner (920-08925) or Duthin® 450 (920-81942) may be used. Typical Set-up Graco AirPro 1.8mm (239543) Pressure at Triton 308: 65-100 kPa (10-15 p.s.i.) Pressure at Gun: 380-415 kPa (55-60 p.s.i.)
AIRLESS SPRAY	Standard airless spray equipment such as Graco Xtreme 45:1 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 usually required but up to 50ml/litre of Dulux® Epoxy Thinner (920-08925) or Duthin® 450 (920-81942) may be added to aid application.
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 5°C when using Fast Cure or Quiccturn® Hardener. In cold conditions use Duthin® 450 (920-81942) may be used. Do not apply at relative humidity above 85% or when the surface is less than 3°C above the dewpoint. DO NOT USE on galvanised steel when using Fast Cure hardener as delamination can occur. Use of fast or low temperature hardeners may result in increased yellowing and decrease in gloss.
CLEAN UP	Clean all equipment with Dulux® Epoxy Thinner (920-08925) or Duthin® 450 (920-81942) 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, CO2 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

Dulux Protective Coatings a division of

DuluxGroup (Australia) Pty Ltd
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PACKAGING, TRANSPORT AND STORAGE

PACKAGING	Available in 4 litre and 15 litre packs
TRANSPORTATION WEIGHT	1.6 kg/litre (Average of components)
DANGEROUS GOODS	Part A: Class 3 UN 1263
	Part B: Class 8,3 UN 2734 (Standard)

Dulux, Duthin, Duremax, Weathermax and Zincanode are registered trade marks of DuluxGroup (Australia) Pty Ltd.

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