

# DUREMAX® GPE

## General Purpose Epoxy Coating

PC 255

- FEATURES**
- EXCELLENT RESISTANCE TO HOT WATER IMMERSION (80°C)
  - EASE OF APPLICATION – SPRAY, BRUSH, ROLLER
  - RANGE OF HARDENERS FOR VARYING CLIMATIC CONDITIONS
  - POTABLE WATER APPROVAL
  - GOOD ABRASION RESISTANCE
  - WIDE RANGE OF COLOURS AVAILABLE FROM THE COLORFAST TINT SYSTEM

**USES** DUREMAX® GPE is a high performance protective coating locally developed specially for Australasian conditions using the latest epoxy technology. DUREMAX® GPE is formulated for the protection of structures exposed to severe environments such as chemical plants, offshore platforms, refineries, shiploaders, coal wash plants etc. Untinted DUREMAX® GPE is suitable for fresh and salt-water immersion when cured with Fast Cure Hardener. DUREMAX® GPE 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**
- AS/NZS 4020:2018 compliant for use in potable water when used in conjunction with a certified coating system.
  - Certificate of test to AS/NZS 1530.3:1999 available for specific coating system and substrates. Refer to a Dulux Protective Coatings Consultant for details of the system.

### RESISTANCE GUIDE

<b>WEATHERABILITY</b>	Will yellow with time and chalk on exterior exposure. Neither yellowing nor chalking detracts from the protective properties of the coating. Use a weatherable topcoat if required for appearance.	<b>SOLVENTS</b>	Resists splash and spillage of most hydrocarbon solvents, refined petroleum products and most common alcohols
<b>HEAT RESISTANCE</b>	Up to 120°C dry heat. Up to 80°C in immersion (White with Fast Cure Hardener)	<b>WATER</b>	Excellent resistance to immersion in fresh and salt water
<b>SALTS</b>	Excellent resistance to neutral and alkali salts	<b>ALKALIS</b>	Suitable for splash and spillage of strong alkali
<b>ACIDS</b>	Suitable for splash and spillage of mild acids	<b>ABRASION</b>	Good when fully cured

### TYPICAL PROPERTIES AND APPLICATION DATA (STANDARD HARDENER)

<b>CLASSIFICATION</b>	General purpose epoxy coating	<b>APPLICATION CONDITIONS</b>			
<b>FINISH</b>	Semi Gloss		Min	Max	
<b>COLOUR</b>	White, Black, Light Grey, a full range of tinted colours and MTO factory made colours.	<b>Air Temp.</b>	10°C	40°C	
<b>COMPONENTS</b>	Two	<b>Substrate Temp.</b>	10°C	40°C	
<b>VOLUME SOLIDS</b>	71±2%	<b>Relative Humidity</b>		85%	
<b>VOC LEVEL</b>	<330 g/L	<b>Concrete Moisture</b>		<6%	
<b>FLASH POINT</b>	4°C	<b>COATING THICKNESS (MICRONS)</b>			
<b>POT LIFE</b>	3-4 Hours (4L, 25°C)		Min	Max	Recommended
<b>MIXING RATIO V/V</b>	Part A : 4 Part B : 1	<b>Wet film per coat (µm)</b>	145	285	180
<b>THINNER</b>	920-08925 Dulux® Epoxy Thinner	<b>Dry film per coat (µm)</b>	100	200	125
<b>THINNER</b>	920-81942 Dulux® Duthin® Cold Weather Thinner	<b>SUITABLE SUBSTRATES</b>	Blast cleaned steel, prepared concrete, aluminium and galvanised steel		
<b>PRODUCT CODE</b>	780-63001 White/Light Base 780-63002 Deep Base 780-63003 Clear Base 780-38678 Light Grey 780-50585 Black 976-84577 Standard Hardener 976-84741 Fast Cure Hardener 976-84892 Quickturn® Hardener	<b>PRIMERS</b>	Dulux® two pack zinc rich primers		
		<b>TOPCOATS</b>	Dulux® two pack topcoats		
		<b>APPLICATION METHODS</b>	Conventional, airless spray or air assisted spray.		

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

Temperature	Humidity	Touch	Handle	Full Cure	OVERCOAT	
					Min	Max <sup>1</sup>
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.  
<sup>1</sup>If 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

**5.7 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.

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## FAST CURE HARDENER

### COATING THICKNESS (MICRONS)

	Min	Max	Recommended
Wet film per coat (µm)	135	270	170
Dry film per coat (µm)	100	200	125

SOLIDS BY VOLUME	75±2%
VOC LEVEL	<300 g/L
FLASH POINT	>23°C
POT LIFE	2 Hours (4 litre kit, 25°C)

### APPLICATION CONDITIONS

	Min	Max
Air Temperature	5°C	40°C
Substrate Surface Temperature	5°C	40°C
Relative Humidity		85%
Concrete Moisture Content		<6%

## DRYING CHARACTERISTICS AT 125 µm DRY FILM THICKNESS\* (FAST CURE HARDENER)

Temperature	Humidity	Touch	Handle	Full Cure	OVERCOAT	
					Min	Max <sup>1</sup>
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.

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

<sup>1</sup>NOTE: 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.

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

**6.0 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	275	170
Dry film per coat (µm)	100	200	125

SOLIDS BY VOLUME	74±2%
VOC LEVEL	<310 g/L
FLASH POINT	>23°C
POT LIFE	90 Minutes (4 litre kit, 25°C)

### APPLICATION CONDITIONS

	Min	Max
Air Temperature	5°C	35°C
Substrate Surface Temperature	5°C	35°C
Relative Humidity		85%
Concrete Moisture Content		<6%

## DRYING CHARACTERISTICS AT 125 µm DRY FILM THICKNESS\* (QUICKTURN® HARDENER)

Temperature	Humidity	Touch	Handle	Full Cure	OVERCOAT	
					Min	Max <sup>1</sup>
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.

<sup>1</sup>If 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 Quickturn® 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 and surface porosity and roughness.

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## 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 OR MAINTENANCE	Immersion System EHB7	Abrasive blast clean AS1627.4 Class 3.0	1 <sup>st</sup> Coat Duremax® GPE (untinted only) 2 <sup>nd</sup> Coat Duremax® GPE (untinted only)	150 µm 150 µm
STEEL – NEW	Very high corrosivity (AS2312.1 Cat C5) System PUR 5	Abrasive blast clean AS1627.4 Class 2.5	1 <sup>st</sup> Coat Zincanode® 402 2 <sup>nd</sup> Coat Duremax® GPE 3 <sup>rd</sup> Coat Weathermax® HBR	75 µm 200 µm 100 µm
STEEL – NEW	Very high corrosivity (AS2312.1 Cat C5) System PUR5	Abrasive blast clean AS1627.4 Class 2.5	1 <sup>st</sup> Coat Durezinc® i90 2 <sup>nd</sup> Coat Duremax® GPE 3 <sup>rd</sup> Coat Luxathane® HPX	75 µm 200 µm 50 µm
STEEL – NEW	High corrosivity (AS2312.1 Cat C5) System PUR 4	Abrasive blast clean AS1627.4 Class 2.5	1 <sup>st</sup> Coat Zincanode® 402 2 <sup>nd</sup> Coat Duremax® GPE 3 <sup>rd</sup> Coat Luxathane® HPX	75 µm 125 µm 50 µm
STEEL – NEW	High corrosivity (AS2312.1 Cat C4) Exceeds System PUR3	Abrasive blast clean AS1627.4 Class 2.5	1 <sup>st</sup> Coat Durepon® EZP 2 <sup>nd</sup> Coat Duremax® GPE 3 <sup>rd</sup> Coat Quantum® FX 4 <sup>th</sup> Coat Quantum® Clearcoat	75 µm 125 µm 55 µm 45 µm
STEEL – NEW	Interior	Abrasive blast clean AS1627.4 Class 2.5	1 <sup>st</sup> Coat Duremax® GPE ZP 2 <sup>nd</sup> Coat Duremax® GPE	125 µm 125 µm
STEEL – NEW	Interior	Abrasive blast clean AS1627.4 Class 2.5	1 <sup>st</sup> Coat Duremax® GPE	125 – 200 µm
CONCRETE	Interior	Remove release agents and other surface contaminants	1 <sup>st</sup> Coat Duremax® GPE (Thin 10-15%) 2 <sup>nd</sup> Coat Duremax® GPE	125 µm 125 µm
GALVANISED STEEL, ALUMINIUM	Exterior/Interior	Clean, degrease and abrade or whip blast surface	1 <sup>st</sup> Coat Duremax® GPE 2 <sup>nd</sup> Coat Weathermax® HBR	150 µm 100 µm

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

<b>SURFACE PREPARATION</b>	<p><b>Steel:</b> 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 (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><b>Immersed steel:</b> Abrasive blast cleaned to AS1627.4 Class 3. Remove all dust by brushing or vacuum cleaning.</p> <p><b>Steel where abrasive blast cleaning is not viable:</b> 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><b>Galvanised steel:</b> 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.</p> <p><b>Concrete:</b> Concrete must 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>									
<b>APPLICATION</b>	Mix each pack thoroughly using a power mixer until the contents are uniform. Ensure bases have been tinted to the correct colour before use. DULUX ASSUMES NO RESPONSIBILITY FOR THE APPLICATION OF INCORRECT COLOUR. Mix the contents of both packs together thoroughly using a power mixer and let stand for 10 minutes. Box all containers before use to ensure colour consistency. Remix thoroughly before application.									
<b>BRUSH/ROLLER</b>	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.									
<b>CONVENTIONAL SPRAY</b>	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.									
	<table border="0"> <tr> <td>Typical Set-up</td> <td>Graco AirPro</td> <td>1.8mm (239543)</td> </tr> <tr> <td></td> <td>Pressure at Triton 308:</td> <td>65-100 kPa (10-15 p.s.i.)</td> </tr> <tr> <td></td> <td>Pressure at Gun:</td> <td>380-415 kPa (55-60 p.s.i.)</td> </tr> </table>	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.)
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<b>AIRLESS SPRAY</b>	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.									

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<b>PRECAUTIONS</b>	<p>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 Quickturn® Hardener. In cold conditions where a fast thinner is required Duthin® 450 (920-81942). Do not apply at relative humidity above 85% or when the surface is less than 3°C above the dewpoint. Do not use Quickturn® Hardener for 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. For best results in water immersion conditions replace Dulux® Epoxy Thinner (920-08925) with Dulux® CR Reducer (965-63020).</p> <p>DO NOT USE on galvanised steel when using Fast Cure hardener as delamination can occur.</p> <p>The use of fast or low temperature hardeners may result in increased yellowing and a reduction of gloss level.</p>												
<b>CLEAN UP</b>	Clean all equipment with Dulux® Epoxy Thinner (920-08925) or Duthin® 450 (920-81942) immediately after use.												
<b>OVERCOATING</b>	<p>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.</p>												
<b>SAFETY PRECAUTIONS</b>	<b>Read Data Sheet, SAFETY DATA SHEET and any precautions on container labels. SAFETY DATA SHEET is available from Customer Service (13 23 77) or <a href="http://www.duluxprotectivecoatings.com.au">www.duluxprotectivecoatings.com.au</a></b>												
<b>STORAGE</b>	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.												
<b>HANDLING</b>	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.												
<b>USING</b>	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.												
<b>FLAMMABILITY</b>	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 <sub>2</sub> or dry chemical powder. On burning will emit toxic fumes.												
<b>WELDING</b>	Avoid inhalation of fumes if welding surfaces coated with this paint. Grind off coating before welding.												
<b>COMPANY INFORMATION</b>													
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