

DUREMAX[®] GPE Zinc Phosphate

General Purpose Epoxy Zinc Phosphate Primer

PC 215

- FEATURES**
- EXCELLENT DURABILITY IN A WIDE RANGE OF ENVIRONMENTS
 - EASE OF APPLICATION - SPRAY, BRUSH, ROLLER
 - ANTI-CORROSION PIGMENTATION
 - GOOD ABRASION RESISTANCE
 - HIGH BUILD FORMULATION PROVIDES SUPERIOR PROTECTION AT EDGES

USES DUREMAX[®] GPE Zinc Phosphate has been locally developed specially for Australasian conditions using the latest epoxy technology. It is a general-purpose epoxy zinc phosphate primer used on mild steel. DUREMAX[®] GPE Zinc Phosphate is a high performance coating for the protection of structures exposed to severe environments such as chemical plants, offshore platforms, refineries, shiploaders, coal wash plants etc. DUREMAX[®] GPE Zinc Phosphate is suitable for fresh and salt-water immersion when suitably topcoated. It is compatible over inorganic zinc and epoxy primers and can be topcoated with a wide range of coating types.

SPECIFICATIONS AS/NZS 3750.13

RESISTANCE GUIDE

HEAT RESISTANCE	Up to 120°C dry heat.	ALKALIS	Suitable for splash and spillage of strong alkali.
WEATHERABILITY	Epoxy coatings may yellow with time. On exterior exposure some chalking may also occur. This will not detract from the protective properties of the coating. Use a weatherable topcoat if required for appearance.	SALTS	Excellent resistance to neutral and alkali salts.
SOLVENTS	Resists splash and spillage of most hydrocarbon solvents, refined petroleum products and most common alcohols.	WATER	Excellent resistance to immersion in fresh and salt water when suitably topcoated.
ACIDS	Suitable for splash and spillage of mild acids.	ABRASION	Good when fully cured.

TYPICAL PROPERTIES AND APPLICATION DATA

CLASSIFICATION	Anticorrosive epoxy primer	APPLICATION CONDITIONS	
FINISH	Semi Gloss (Eggshell)		
COLOUR	Grey (Approximate Match to AS2700 N33 Lightbox Grey)		Refer to Page 2
COMPONENTS	Two		
SOLIDS BY VOLUME	Refer to Page 2		
VOC LEVEL	Refer to Page 2		
FLASH POINT	4°C		
POT LIFE	Refer to Page 2		
MIXING RATIO (V/V)	Part A : 4 Part B : 1		
THINNER	920-81942 DUTHIN [®] 450 920-08925 Dulux [®] Epoxy Thinner		
PRODUCT CODE	780-52033 Part A 976-84577 Standard Hardener 976-84741 Fast Cure Hardener 976-84892 Quickturn [™] Hardener	SUITABLE SUBSTRATES	Blast cleaned steel. Prepared concrete, aluminium and galvanised steel.
		APPLICATION METHODS	Brush, roller, conventional or airless spray.

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Standard Hardener

COATING THICKNESS				APPLICATION CONDITIONS			
	Min	Max	Recom.		Min	Max	
Wet film per coat (microns)	140	280	175	Air Temperature	10°C	45°C	
Dry film per coat (microns)	100	200	125	Substrate Surface Temperature	10°C	45°C	
				Relative Humidity		85%	
SOLIDS BY VOLUME	71%			POT LIFE	3-4 Hours (4L, 25°C)		
VOC LEVEL	< 330g/L						

Drying characteristics at 125 microns dry film thickness

Temperature	Humidity	Touch	Handle	Full Cure	Overcoat	
					Min	Max
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*

TYPICAL SPREADING RATE AT RECOMMENDED DRY FILM BUILD

A spreading rate of 5.7 sq. metres per litre corresponds to 125 microns dry film thickness assuming no losses. Practical spreading rates will vary depending on such factors as method and conditions of application and surface roughness.

Fast Cure Hardener

COATING THICKNESS				APPLICATION CONDITIONS			
	Min	Max	Recom.		Min	Max	
Wet film per coat (microns)	135	270	170	Air Temperature	5°C	45°C	
Dry film per coat (microns)	100	200	125	Substrate Surface Temperature	5°C	45°C	
				Relative Humidity		85%	
SOLIDS BY VOLUME	75%			POT LIFE	2 Hours (4L, 25°C)		
VOC LEVEL	< 300 g/L						

Drying characteristics at 125 microns dry film thickness

Temperature	Humidity	Touch	Handle	Full Cure	Overcoat	
					Min	Max
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*

TYPICAL SPREADING RATE AT RECOMMENDED DRY FILM BUILD

A spreading rate of 6.0 sq. metres per litre corresponds to 125 microns dry film thickness assuming no losses. Practical spreading rates will vary depending on such factors as method and conditions of application and surface roughness.

Quickturn™ Hardener

COATING THICKNESS				APPLICATION CONDITIONS			
	Min	Max	Recom.		Min	Max	
Wet film per coat (microns)	140	280	175	Air Temperature	5°C	35°C	
Dry film per coat (microns)	100	200	125	Substrate Surface Temperature	5°C	35°C	
				Relative Humidity		85%	
SOLIDS BY VOLUME	72%			POT LIFE	90 Minutes (4L, 25°C)		
VOC LEVEL	< 310 g/L						

Drying characteristics at 125 microns dry film thickness

Temperature	Humidity	Touch	Handle	Full Cure	Overcoat	
					Min	Max
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*

TYPICAL SPREADING RATE AT RECOMMENDED DRY FILM BUILD

A spreading rate of 5.8 sq. metres per litre corresponds to 125 microns dry film thickness assuming no losses. Practical spreading rates will vary depending on such factors as method and conditions of application and surface roughness.

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

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.

* When used for non-immersion conditions. Refer to PRECAUTIONS section for overcoating intervals and requirements for immersion service.

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TYPICAL SYSTEMS

(The typical systems are offered as a guide only and are not to be used as a specification. It is recommended that the specific needs of a project be discussed with a Dulux Protective Coatings Consultant.)

SURFACE	PREPARATION GUIDE	SYSTEM		DRY FILM THICKNESS
STEEL New Construction	Abrasive blast AS1627.4 Class 2.5	1st Coat	DUREMAX® GPE ZP	125 microns
		2nd Coat	WEATHERMAX® HBR	100 microns
STEEL Immersion -Salt or Freshwater	Abrasive blast to AS1627.4 Class 3.0	1st Coat	DUREMAX® GPE ZP	125 - 200 Microns
		2nd Coat	DUREMAX® GPE (untinted colour only)	125 - 200 Microns

SURFACE PREPARATION Round off all rough welds, sharp edges and remove weld spatter. Remove grease, oil and other contaminants in accordance with AS1627.1. For steel substrates, abrasive blast clean to a minimum of AS1627.4 Class 2.5 with a blast profile of 40-70 microns. For non-ferrous substrates whip blast. Immersed steel must be prepared to AS1627.4 Class 3. Remove all dust by brushing or vacuum cleaning.

APPLICATION Stir each can thoroughly until the contents are uniform. Use of a power mixer is recommended. Mix the contents of both packs together thoroughly using a power mixer and allow to stand for 10 minutes. Remix thoroughly before using.

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 DUTHIN®450 (920-81942) can be added.

Typical Set-up

Graco Delta Gun: 1.8mm (239543)
Pressure at Pot: 70-100 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 a Graco 45:1 Xtreme 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 ease 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® representative 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 hot weather use Dulux® Epoxy Thinner (920-08925) for improved flow. 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 solvent free prior to be 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 as a primer over galvanised steel when using Fast 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 DUTHIN®450 (920-81942) immediately after use.

OVERCOATING Aged coating should be tested for lifting by a method appropriate for the coating thickness, for example 'X' cut or cross-hatch methods. If it lifts, remove it. The surface must be free of oil, grease and other contaminants. High-pressure water wash at 8.3 to 10.3 MPa (1,200 - 1,500 p.s.i.) to remove loosely adhering chalk and dust. Abrasion may be required depending on surface condition. If the maximum overcoat interval is exceeded then the surface MUST be abraded to ensure maximum intercoat adhesion.

SAFETY PRECAUTIONS Read Data Sheet, Material Safety Data Sheet and any precautionary labels on containers.

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 spray painting, users should comply with the provisions of the 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.

MATERIAL SAFETY DATA SHEET is available from Customer Service (132377) or www.duluxprotectivecoatings.com.au

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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

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