

DUREMAX[®] HBE

Fast Cure High Build Epoxy Coating

PC 257

- FEATURES**
- HIGHLY RESISTANT TO CHEMICAL, SOLVENTS AND AGGRESSIVE EXPOSURE
 - SUITABLE FOR APPLICATION TO PREPARED CONCRETE
 - ABRASION RESISTANT FILM
 - VOC LESS THAN 100 g/L
 - WILL CONTINUE TO CURE WHEN IMMERSED IN WATER
 - HIGH BUILD ONE COAT PROTECTION

USES DUREMAX[®] HBE is a high-solids, two component epoxy with high build characteristics allowing single coat application up to 500 microns dry film thickness direct to suitably prepared mild steel. DUREMAX[®] HBE is designed for the protection of marine structures and chemical plants where maximum resistance to chemicals, abrasion or solvents is required. DUREMAX[®] HBE can be topcoated with a wide range of coating types.

SPECIFICATIONS AS/NZS 3750.14

RESISTANCE GUIDE

WEATHERABILITY	Will yellow with time. Will chalk on exterior exposure. Neither yellowing nor chalking detracts from the protective properties of the coating. Use a weatherable topcoat if required for appearance.	SOLVENTS	Good resistance to splash and spillage of aromatic and aliphatic hydrocarbon solvents and alcohols
HEAT RESISTANCE	Up to 120°C dry heat	WATER	Excellent resistance to fresh and salt water. Suitable for immersion
SALTS	Unaffected by splash and spillage of neutral and alkaline salt solutions	ALKALIS	Excellent resistance to splash and spillage of most alkalies
ACIDS	Suitable for splash and spillage exposure to dilute acids	ABRASION	Excellent when fully cured 134.9 mg weight loss per 1000 cycles, using a CS-17 wheel and a 1 kg load
		ADHESION	Excellent when fully cured 11.3 MPa @250 micron (Dolly Pull-Off test, AS1580.408.5)

TYPICAL PROPERTIES AND APPLICATION DATA (STANDARD HARDENER)

CLASSIFICATION	High build two pack epoxy finish	APPLICATION CONDITIONS			
FINISH	High Gloss		Min	Max	
COLOUR	A full range of tinted colours and MTO factory made colours.	Air Temp.	10°C	45°C	
COMPONENTS	Two	Substrate Temp.	10°C	45°C	
VOLUME SOLIDS	88% (White/Light Base)	Relative Humidity		85%	
VOC LEVEL	<96 g/L (White/Light Base, untinted)	Concrete Moisture		<10%	
FLASH POINT	14 °C	COATING THICKNESS (MICRONS)			
POT LIFE	1.5 Hours (4 litre kit, 25°C)		Min	Max	Recommended
MIXING RATIO V/V	Part A : 3 Part B : 1	Wet film per coat (µm)	285	570	285
THINNER	920-08925 Dulux [®] Epoxy Thinner	Dry film per coat (µm)	250	500	250
THINNER (IMMERSION)	965-63020 Dulux [®] CR Reducer	SUITABLE SUBSTRATES	Blast cleaned steel. Suitably primed steel and prepared concrete.		
PRODUCT CODE	773-63001 White/Light Base 773-63002 Deep Base 773-63003 Clear Base 976-H0201 Standard Hardener 976-H0209 Cold Cure Hardener	PRIMERS	Inorganic zinc or two-pack epoxy primers		
		APPLICATION METHODS	Conventional, airless spray or roller		

DRYING CHARACTERISTICS AT 250 µm DRY FILM THICKNESS*

Temperature	Humidity	Touch	Handle	Full Cure	OVERCOAT	
					Min	Max ^{1, 2}
15° C	50%	6 Hours	12 Hours	7 Days	12 Hours	10 Days
25° C	50%	3 Hours	6 Hours	7 Days	6 Hours	7 Days

*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.

²NOTE: Figures shown are for non-immersion conditions. When used for immersion the maximum overcoat interval is 48 hours. The coating can be exposed to early immersion, however please contact your Dulux[®] Protective Coatings Consultant for specific advice relating to your project.

SPREADING RATE 3.5 square metres per litre equals 250 µm dry film thickness

ASSUMING NO LOSSES

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

DUREMAX[®] HBE

COLD CURE HARDENER

COATING THICKNESS (MICRONS)

	Min	Max	Recommended
Wet film per coat (µm)	285	570	285
Dry film per coat (µm)	250	500	250
SOLIDS BY VOLUME	90% (White/Light Base)		
VOC LEVEL	<84 g/L (White/Light, untinted)		
POT LIFE	50 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 250 µm DRY FILM THICKNESS* (COLD CURE HARDENER)

OVERCOAT

Temperature	Humidity	Touch	Handle	Full Cure	Min	Max ^{1,2}
5° C	50%	7.5 Hours	20 Hours	7 Days	20 Hours	7 Days
10° C	50%	7 Hours	18 Hours	7 Days	18 Hours	7 Days
15° C	50%	4.5 Hours	14 Hours	7 Days	14 Hours	7 Days
25° C	50%	2 Hours	5 Hours	7 Days	5 Hours	7 Days

*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.

²**NOTE:** Figures shown are for non-immersion conditions. **When used for immersion the maximum overcoat interval is 48 hours.** The coating can be exposed to early immersion, however please consult your Dulux[®] Protective Coatings representative for specific advice relating to your project.

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

3.5 square metres per litre equals 250 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	Immersion (AS2312.1) System EVH3	Abrasive blast AS1627.4 Class 3.0	1 st Coat Duremax [®] HBE 2 nd Coat Duremax [®] HBE	250 µm 250 µm
STEEL	Severe Industrial (AS2312.1) System ETL1	Abrasive blast clean AS1627.4 Class 2.5	1 st Coat Duremax [®] HBE 2 nd Coat Duremax [®] HBE	250 µm 250 µm
STEEL	Very High Corrosivity (Exceeds AS2312.1 Cat C5-I) System PUR5	Abrasive blast clean AS1627.4 Class 2.5	1 st Coat Zincode [®] 402 2 nd Coat Duremax [®] HBE 3 rd Coat Weathermax [®] HBR	75 µm 250 µm 100 µm
STEEL	Immersion (AS2312.1) System EVH2	Abrasive blast AS1627.4 Class 3.0	1 st Coat Duremax [®] HBE	400 µm
STEEL	High Corrosivity (Exceeds AS2312.1 Cat C4) System EHB4	Abrasive blast clean AS1627.4 Class 2.5	1 st Coat Zincode [®] 402 2 nd Coat Duremax [®] HBE	75 µm 250 µm
STEEL MAINTENANCE	Interior/Exterior	Hand or Power tool clean AS1627.2 St 3 or Abrasive blast AS1627.4 Class 1	1 st Coat Duremax [®] HBE 2 nd Coat Duremax [®] HBE	250 µm 250 µm
CONCRETE	Interior	Remove release agents and other surface contaminants. Whip blast to remove adhering material.	1 st Coat Duremax [®] HBE 2 nd Coat Duremax [®] HBE	250 µm 250 µm

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

SURFACE PREPARATION	<p>Steel: Round off all rough welds, sharp edges and remove weld spatter. Degrease in accordance with AS1627.1. Abrasive blast clean to a minimum of AS1627.4 Class 2.5.</p> <p>Immersed steel: Abrasive blast clean to AS1627.4 Class 3. Remove all dust by brushing or vacuum cleaning.</p> <p>Concrete: Concrete must be at least 28 days old before coating. Remove all laitance, form release, curing compounds, oil, grease and other surface contaminants. Diamond grind, track or light shot-blast concrete floors to provide a profile. Remove all dust by vacuum cleaning. Fill any large cracks or voids using Luxepoxy® Filler.</p>									
APPLICATION	Mix each pack thoroughly using a power mixer until the contents are uniform. Mix the contents of both packs together thoroughly with a power mixer and let stand for 10 minutes. Remix thoroughly before application.									
BRUSH/ROLLER	Recommended for brush application only for spot patching on rivets, seams, etc. Roller application suitable for use on concrete floors by applying even coats of mixed material to the prepared surface. Thin if necessary with up to 100ml/litre with Dulux® Epoxy Thinner (920-08925) to ease application. When brushing and rolling additional coats may be required to attain the specified thickness.									
CONVENTIONAL SPRAY	Thin up to 100ml/litre with Dulux® Epoxy Thinner (920-08925) may be used to aid atomisation. Apply in multiple wet coats overlapping each pass 50%.									
	<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>70-100 kPa (10-15 p.s.i.)</td> </tr> <tr> <td></td> <td>Pressure at Gun:</td> <td>380-410 kPa (55-60 p.s.i.)</td> </tr> </table>	Typical Set-up	Graco AirPro	1.8mm (239543)		Pressure at Triton 308:	70-100 kPa (10-15 p.s.i.)		Pressure at Gun:	380-410 kPa (55-60 p.s.i.)
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AIRLESS SPRAY	Standard airless spray equipment such as a Graco Xtreme 60:1 with a fluid tip of 19-21 thou (0.48- 0.53mm) and an air supply capable of delivering 550-690 kPa (80-100 p.s.i.) at the pump. Thinning is not normally required but up to 50 ml/litre of Dulux® Epoxy Thinner (920-08925) may be used to aid atomisation.									
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 written consent of Dulux® Australia. Freshly mixed material must not be added to material that has been mixed for some time. The rate of cure is dependent upon temperature. 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 applying this product to broad surfaces such as floors use only one application method to avoid colour variation or streaking. When used in light colours, the Cold Cure Hardener will impart a yellow tone that will darken with time. When used for immersion conditions, the maximum overcoat interval is 48 hours at 25°C. The coating can be exposed to early immersion, however please consult your Dulux® Protective Coatings Consultant for specific advice relating to your project. For best results in water immersion conditions replace Dulux® Epoxy Thinner (920-08925) with Dulux® CR Reducer (965-63020). Use of a 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	The PART A is classified as a Class 9 Miscellaneous Dangerous Good and the PART B is classified as a Class 8 Corrosive, as per the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and/or the "New Zealand NZS5433: Transport of Dangerous Goods on Land" and must be stored in accordance with the relevant regulations. 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	1.69 kg/litre (Average of components)
		DANGEROUS GOODS	Part A: Class 9 UN 3082 Part B: Class 8 UN 1760

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