

DUREBILD® HSE

High Build Two Pack Epoxy Coating

PC 230

- FEATURES**
- HIGHLY RESISTANT TO CHEMICAL, SOLVENTS AND AGGRESSIVE EXPOSURE
 - SUITABLE FOR APPLICATION TO PREPARED CONCRETE
 - EXTREMELY TOUGH ABRASION RESISTANT FILM
 - HIGH BUILD ONE COAT PROTECTION

USES DUREBILD® HSE 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 and over inorganic zinc rich or epoxy anti-corrosive primers. DUREBILD® HSE is especially designed for the protection of marine structures and chemical plants where maximum resistance to chemicals, abrasion or solvents is required. DUREBILD® HSE suitable as a tank lining for the storage of potable water.

SPECIFICATIONS AS/NZ 4020:2005 - suitable for use with potable water when using untinted White Base cured with Standard Hardener only. Refer to your Dulux Protective Coatings Consultant for details. AS/NZS 3750.14

RESISTANCE GUIDE

WEATHERABILITY	Will yellow with time. Will chalk on exposure to UV. Neither yellowing nor chalking detracts from the protective properties of the coating. Use a weatherable topcoat if appearance is important.	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 alkalis
ACIDS	Suitable for splash and spillage exposure to dilute acids.	ABRASION	Excellent when fully cured. 205 mg per 1000 cycles (CS-17, 1000 gm load/wheel).
		ADHESION	8.6 MPa (1258 p.s.i) (Adhesion Pull-Off Test, AS1580.408.5)

TYPICAL PROPERTIES AND APPLICATION DATA (STANDARD HARDENER)

CLASSIFICATION	High build two pack epoxy finish		APPLICATION CONDITIONS			
FINISH	Gloss			Min	Max	
COLOUR	White, N35 Light Grey, limited range of tinted colours and MTO factory made colours.		Air Temp.	10°C	40°C	
COMPONENTS	Two		Substrate Temp.	10°C	40°C	
VOLUME SOLIDS	85% (White/Light Base)		Relative Humidity	85%		
VOC LEVEL	<140 g/L (White/Light Base, untinted)		Concrete Moisture	<6%		
FLASH POINT	15°C		COATING THICKNESS (MICRONS)			
POT LIFE	2 Hours (20 litre kit, 25°C)			Min	Max	Recommended
MIXING RATIO V/V	Part A : 4	Part B : 1	Wet film per coat (µm)	145	590	235
THINNER	920-08925	Dulux® Epoxy Thinner	Dry film per coat (µm)	125	500	200
THINNER (IMMERSION)	965-63020	Dulux® CR Reducer	SUITABLE SUBSTRATES	Blast cleaned steel. Suitably primed steel and prepared concrete.		
PRODUCT CODE	744-00026	White	PRIMERS	Inorganic zinc or two-pack epoxy primers		
	744-63002	Deep Base	APPLICATION METHODS	Brush, roller, conventional, airless spray or air assisted spray		
	744-38678	N35 Light Grey				
	980-50251	Standard Hardener				
	980-50269	Fast Hardener				
	980-H0074	CS Hardener				
	980-H0113	Fast CS Hardener				

DRYING CHARACTERISTICS AT 200 µm DRY FILM THICKNESS*

Temperature	Humidity	Touch	Handle	Full Cure	OVERCOAT	
					Min	Max ¹
25° C	50%	5 Hours	24 Hours	7 Days	24 Hours	48 Hours

*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 ASSUMING NO LOSSES

4.2 square metres per litre equals 200 µm dry film thickness

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

DUREBILD® HSE

CS HARDENER

COATING THICKNESS (MICRONS)

	Min	Max	Recommended
Wet film per coat (µm)	145	590	235
Dry film per coat (µm)	125	500	200

APPLICATION CONDITIONS

	Min	Max
Air Temperature	10°C	40°C
Substrate Surface Temperature	10°C	40°C
Relative Humidity		85%
Concrete Moisture Content		<6%

SOLIDS BY VOLUME	85% (White/Light Base)
VOC LEVEL	<140 g/L (White/Light Base, untinted)
POT LIFE	2 hours (20 litre kit, 25°C)

DRYING CHARACTERISTICS AT 200 µm DRY FILM THICKNESS (CS HARDENER)*

OVERCOAT

Temperature	Humidity	Touch	Handle	Full Cure	Min	Max ¹
25° C	50%	5 Hours	24 Hours	7 Days	24 Hours	48 Hours

SPREADING RATE 4.2 square metres per litre equals 200 µm dry film thickness

with CS Hardener
assuming no losses

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

FAST HARDENER

COATING THICKNESS (MICRONS)

	Min	Max	Recommended
Wet film per coat (µm)	145	590	235
Dry film per coat (µm)	125	500	200

APPLICATION CONDITIONS

	Min	Max
Air Temperature	10°C	40°C
Substrate Surface Temperature	10°C	40°C
Relative Humidity		85%
Concrete Moisture Content		<6%

SOLIDS BY VOLUME	85% (White/Light Base)
VOC LEVEL	<140 g/L (White/Light Base, untinted)
POT LIFE	2 hours (20 litre kit, 25°C)

DRYING CHARACTERISTICS AT 200 µm DRY FILM THICKNESS (FAST HARDENER)*

OVERCOAT

Temperature	Humidity	Touch	Handle	Full Cure	Min	Max ¹
15° C	50%	14 Hours	28 Hours	7 Days	24 Hours	48 Hours
25° C	50%	6 Hours	14 Hours	7 Days	13 Hours	48 Hours

SPREADING RATE 4.2 square metres per litre equals 200 µm dry film thickness

with Fast Hardener
assuming no losses

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

FAST CURE CURE CS HARDENER

COATING THICKNESS (MICRONS)

	Min	Max	Recommended
Wet film per coat (µm)	145	590	235
Dry film per coat (µm)	125	500	200

APPLICATION CONDITIONS

	Min	Max
Air Temperature	10°C	40°C
Substrate Surface Temperature	10°C	40°C
Relative Humidity		85%
Concrete Moisture Content		<6%

SOLIDS BY VOLUME	85% (White/Light Base)
VOC LEVEL	<140 g/L (White/Light Base, untinted)
POT LIFE	2 hours (20 litre kit, 25°C)

DRYING CHARACTERISTICS AT 200 µm DRY FILM THICKNESS*

OVERCOAT

Temperature	Humidity	Touch	Handle	Full Cure	Min	Max ¹
10° C	50%	12 Hours	24 Hours	7 Days	24 Hours	48 Hours
15° C	50%	6 Hours	12 Hours	7 Days	12 Hours	48 Hours
25° C	50%	3 Hours	6 Hours	7 Days	6 Hours	48 Hours

*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 4.2 square metres per litre equals 200 µm dry film thickness

with Fast Cure CS Hardener
assuming no losses

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

DUREBILD® HSE

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 System EVH3	Abrasive blast AS1627.4 Class 3.0	1 st Coat	Durebild® HSE	250 µm
			2 nd Coat	Durebild® HSE	250 µm
STEEL	High Corrosivity (AS2312.1 Cat C4) System EHB4	Abrasive blast clean AS1627.4 Class 2.5	1 st Coat	Zincanode® 402	75 µm
			2 nd Coat	Durebild® HSE	200 µm
CONCRETE	Immersion	Remove release agents and other surface contaminants. Whip blast to remove adhering material.	1 st Coat	Durebild® HSE	200 µm
			2 nd Coat	Durebild® HSE	200 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. Degrease in accordance with AS1627.1. Abrasive blast clean to a minimum of AS1627.4 Class 2.5 with a blast profile of 30 – 50 microns. Immersed steel: Abrasive blast clean to AS1627.4 Class 3 with a blast profile of 50 – 75 microns. Remove all dust by brushing or vacuum cleaning. 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 with Luxepoxy® Filler.
APPLICATION	Mix each can 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 with a power mixer and let stand for 10 minutes. Box all containers before use to ensure colour consistency. 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 50ml/litre with Dulux® Epoxy Thinner (920-08925) to aid application. When brushing and rolling additional coats may be required to attain the specified thickness.
CONVENTIONAL SPRAY	Thinning is not normally required but up to 50ml/litre with Dulux® Epoxy Thinner (920-08925) may be used to aid atomisation. Apply in multiple wet coats overlapping each pass 50%. 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.)
AIRLESS SPRAY	Standard airless spray equipment such as a Graco Xtreme 56:1 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. 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, use only one application method to avoid colour variation or streaking. Use of fast hardeners may result in a reduction of gloss level. When intended for use in immersion, replace Dulux® Epoxy Thinner (920-08925) with Dulux® CR Reducer (965-63020).
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

Dulux Protective Coatings a division of	
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

PACKAGING, TRANSPORT AND STORAGE

PACKAGING	Available in 20 litre packs
TRANSPORTATION WEIGHT	1.28 kg/litre (Average of components)
DANGEROUS GOODS	Part A: Class 3 UN 1263
	Part B: Class 8 UN 2735

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