

DUREBILD® STE GF

Surface Tolerant Glass Flake Reinforced Epoxy Coating

PC 239

- FEATURES**
- EXCELLENT SURFACE WETTING PROPERTIES AND CORROSION RESISTANCE
 - HIGH PERFORMANCE MAINTENANCE COATING FOR NEW OR EXISTING STEEL
 - EXCELLENT BARRIER FOR IMMERSION OR SPLASH ZONE
 - IDEAL MAINTENANCE COATING OVER MOST WELL ADHERED AGED COATINGS
 - SELF PRIMING FINISH
 - CAN BE APPLIED UP TO 500 MICRONS DFT IN A SINGLE COAT
 - GOOD ABRASION RESISTANCE

USES DUREBILD STE® Glass Flake has been developed specifically for Australasian conditions using advanced epoxy technology. It is principally used as a high build, heavy duty barrier coating over power tool or high-pressure water cleaned surfaces where blasting is impractical or not allowed. This coating can also be used for new work as a high performance intermediate coat. The glass flake formulation is suitable for fresh and salt-water immersion over abrasive blast cleaned steel. DUREBILD® STE Glass Flake can be topcoated with a wide range of coating types and is available with a bloom-free cold cure hardener.

SPECIFICATIONS ASPAS 2973 & 2973F - assessed and confirmed to meet all requirements on specific certified products. Refer to a Dulux Protective Coatings Consultant for more details.
AS/NZS 3750.1

RESISTANCE GUIDE

WEATHERABILITY	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.	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 and suitable for immersion
SALTS	Excellent resistance to neutral and alkali salts	ALKALIS	Suitable for splash and spillage of strong alkalis
ACIDS	Suitable for splash and spillage of mild acids	ABRASION	Good when fully cured

TYPICAL PROPERTIES AND APPLICATION DATA (STANDARD HARDENER)

CLASSIFICATION	Two Pack Glass Reinforced Epoxy	APPLICATION CONDITIONS			
FINISH	Semi Gloss		Min	Max	
COLOUR	Mid Grey, Black & limited MTO factory made colours.	Air Temp.	10°C	40°C	
COMPONENTS	Two	Substrate Temp.	10°C	40°C	
VOLUME SOLIDS	>85% (Black)	Relative Humidity		85%	
VOC LEVEL	<210 g/L (Black)	Concrete Moisture		<6%	
FLASH POINT	42°C	COATING THICKNESS (MICRONS)			
POT LIFE	90 Minutes (4 litre kit, 25°C)		Min	Max	Recommended
MIXING RATIO V/V	Part A : 4 Part B : 1	Wet film per coat (µm)	240	600	300
THINNER	920-08925 Dulux® Epoxy Thinner	Dry film per coat (µm)	200	500	250
THINNER (IMMERSION)	965-63020 Dulux® CR Reducer	SUITABLE SUBSTRATES	Prepared rusty steel. Aged tightly adhering coatings. Prepared concrete, aluminium and galvanised steel.		
PRODUCT CODE	775-51833 Mid Grey 775-52129 Black 976-84539 Standard Hardener 976-84685 Cold Cure Hardener	SUITABLE PRIMERS	Dulux® two pack primers		
		APPLICATION METHODS	Brush, roller, conventional or airless spray		

DRYING CHARACTERISTICS AT 250 µm DRY FILM THICKNESS* (STANDARD HARDENER)

Temperature	Humidity	Touch	Handle	Full Cure	OVERCOAT	
					Min	Max ¹
10° C	50%	14 Hours	36 Hours	7 Days	36 Hours	4 Weeks
15° C	50%	10 Hours	24 Hours	7 Days	24 Hours	4 Weeks
25° C	50%	6 Hours	14 Hours	7 Days	14 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 3.4 square metres per litre equals 250 µm dry film thickness

WITH STANDARD HARDENER ASSUMING NO LOSSES

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

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COLD CURE HARDENER

COATING THICKNESS (MICRONS)

	Min	Max	Recommended
Wet film per coat (µm)	300	600	300
Dry film per coat (µm)	250	500	250
SOLIDS BY VOLUME	>87% (Black)		
VOC LEVEL	<190 g/L (Black)		
FLASH POINT	>23°C		
POT LIFE	60 Minutes (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 250 µm DRY FILM THICKNESS* (COLD CURE HARDENER)

OVERCOAT

Temperature	Humidity	Touch	Handle	Full Cure	Min	Max ¹
5° C	50%	14 Hours	28 Hours	7 Days	28 Hours	4 Weeks
10° C	50%	13 Hours	24 Hours	7 Days	24 Hours	4 Weeks
15° C	50%	12 Hours	18 Hours	7 Days	18 Hours	4 Weeks
25° C	50%	6 Hours	9 Hours	7 Days	9 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.

¹NOTE: 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.

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

3.4 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 – NEW	Very high corrosivity (AS2312.1 Cat C5) System PUR 5	Abrasive blast clean AS1627.4 Class 2.5	1 st Coat Zincanode® 402 2 nd Coat Durebild® STE GF 3 rd Coat Weathermax® HBR	75 µm 250 µm 100 µm
STEEL – MAINTENANCE	Very high corrosivity	Power tool clean AS1627.2 St 3 or Abrasive blast AS1627.4 Class 1	Spot prime 1 st Coat Durebild® STE GF 2 nd Coat Durebild® STE GF Weathermax® HBR	250 µm 250 µm 100 µm
STEEL – NEW OR MAINTENANCE	Immersion Exceeds System EVH2	Abrasive blast clean AS1627.4 Class 3.0	1 st Coat Durebild® STE GF	500 µm
STEEL – NEW OR MAINTENANCE	Immersion Exceeds System EVH3	Abrasive blast clean AS1627.4 Class 3.0	1 st Coat Durebild® STE GF 2 nd Coat Durebild® STE GF	250 µm 250 µm
CONCRETE	Exterior	Remove release agents and other surface contaminants	1 st Coat Durebild® STE GF 2 nd Coat Durebild® STE GF (thin first coat 10-15%) Weathermax® HBR	250 µm 100 µm
CONCRETE	Immersion	Remove release agents and other surface contaminants	1 st Coat Durebild® STE GF 2 nd Coat Durebild® STE GF (thin first coat 10-15%) Durebild® STE GF	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

DUREBILD® STE GF

SURFACE PREPARATION	<p>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 (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>Immersed steel: Abrasive blast cleaned to AS1627.4 Class 3. Remove all dust by brushing or vacuum cleaning.</p> <p>Steel where abrasive blast cleaning is not viable: 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>Concrete: Concrete must be at least 28 days old before coating. Remove all laitance, form release, curing compounds, oil, grease and other surface contaminants.</p> <p>Horizontal surfaces: 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 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 using a power mixer and allow to stand for 10 minutes. Box all containers before use to ensure colour consistency. Remix thoroughly before 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) can be added.									
	<table border="0"> <tr> <td>Typical Set-up</td> <td>Graco AirPro:</td> <td>1.8mm (239542)</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 (239542)		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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	Pressure at Gun:	380-410 kPa (55-60 p.s.i.)								
AIRLESS SPRAY	Standard airless spray equipment such as a Graco Xtreme 45:1 or 56:1 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 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® 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 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 used for immersion conditions the maximum overcoat interval is 3 days at 25°C. The coating MUST be fully cured and 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). In tidal areas early immersion will result in loss of some of the coating but this will not affect performance. Do not use on galvanised steel when using Cold 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 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 bonded 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 15 litre packs									
TRANSPORTATION WEIGHT	1.61 kg/litre (Average of components)									
DANGEROUS GOODS	Part A: Class 3 UN 1263 Part B: Class 8,3 UN 2734									

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

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