DUREMAX® GFX

High Performance Surface Tolerant Glass Flake Epoxy PC 256

FEATURES
- HIGH GLASS FLAKE CONTENT - EXCELLENT BARRIER FOR IMMERSION OR SPLASH ZONE
- SUPERIOR FORMULATION FOR SURFACE WETTING AND CORROSION RESISTANCE
- GOOD ABRASION AND CHEMICAL RESISTANCE

USES

DUREMAX® GFX is a self-priming, high solid, high build glass flake reinforced epoxy developed to deliver long-term corrosion resistance. Ideally suited to protecting new steelwork from atmospheric and marine corrosion including coastal and offshore structures, above and below the waterline.

The adhesion strength of DUREMAX® GFX allows it to be used as a high-performance maintenance coating over hand, power tool or high-pressure water-cleaned surface.

SPECIFICATIONS
- AS 4352-2005 “Tests for Coating Resistance to Cathodic Disbondment”. Group A classification (When applied in two coats at 250 µm DFT per coat directly applied to abrasive blast cleaned steel - AS1627.4 Class 3).
- AS/NZS 4020:2018 - compliant for use in potable water when used in conjunction with a certified coating system.
- APAS 2973, 2973F & 2973S - assessed and confirmed to meet all requirements on specific certified products.

Refer to a Dulux Protective Coatings Consultant for more details.

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.
		WATER	Excellent resistance to immersion in fresh and salt water.
HEAT RESISTANCE	Up to 120°C dry heat.		
SALTS	Excellent resistance to neutral and alkaline salts.	**ALKALIS**	Good resistance to splash and spillage of 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 Flake Reinforced Epoxy
FINISH	Semi-Gloss
COLOUR	Mid-Grey & Black. MTO include: Blue - Grey, Light-Grey, Navy-Blue, Neutral-Grey.
COMPONENTS	Two
VOLUME SOLIDS	>85% ± 2 (Black)
VOC LEVEL	<210 g/L (Black)
FLASH POINT	>23°C
POT LIFE	90 minutes (4 litre kit, 25°C)
MIXING RATIO V/V	Part A : 4 Part B : 1
THINNER	920-08925 Dulux® Epoxy Thinner
THINNER -IMMERSION	965-63020 Dulux® CR Reducer
PRODUCT CODE	775-H0095 Mid-Grey 775-H0094 Black 775-H0377 Blue-Grey (MTO) 775-H0384 Neutral-Grey (MTO) 775-H0400 Light-Grey (MTO) 775-H0403 Navy-Blue (MTO) 976-H0096 Standard Hardener 976-H0126 Cold Cure Hardener 976-H0438 Quickturn® Hardener

APPLICATION CONDITIONS

	Min	Max
Air Temp.	10°C	40°C
Substrate Temp.	10°C	40°C
Relative Humidity		85%
Concrete Moisture		<6%

COATING THICKNESS (MICRONS)

	Min	Max	Recommended
Wet film per coat (µm)	240	590	295
Dry film per coat (µm)	200	500	250

SUITABLE SUBSTRATES	May be used over weathered steel, aged with tightly adhering coatings, concrete, and galvanised steel when these substrates are prepared to a suitable specification.
PRIMERS	Most Dulux® two pack primers
APPLICATION METHODS	Conventional, airless, or air-assisted spray

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

					OVERCOAT	
Temperature	**Humidity**	**Touch**	**Handle**	**Full Cure**	**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.

[1]**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

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, surface porosity and roughness.

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COLD CURE HARDENER

COATING THICKNESS (MICRONS)

	Min	Max	Recommended
Wet film per coat (µm)	235	585	295
Dry film per coat (µm)	200	500	250

SOLIDS BY VOLUME	>86% ± 2 (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	30°C
Substrate Surface Temperature	5°C	30°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.

[1] **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.

NOTE: Figures shown are for non-immersion conditions. Refer to the PRECAUTIONS section for overcoating intervals and requirements for immersion service.

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, surface porosity and roughness.

QUICKTURN® HARDENER

COATING THICKNESS (MICRONS)

	Min	Max	Recommended
Wet film per coat (µm)	230	575	290
Dry film per coat (µm)	200	500	250

SOLIDS BY VOLUME	>87% ± 2 (Black)
VOC LEVEL	<190 g/L (Black)
FLASH POINT	>23°C
POT LIFE	45 Minutes (15 litre kit, 25°C)

APPLICATION CONDITIONS

	Min	Max
Air Temperature	5°C	30°C
Substrate Surface Temperature	5°C	30°C
Relative Humidity		85%
Concrete Moisture Content		<6%

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

					OVERCOAT	
Temperature	Humidity	Touch	Handle	Full Cure	Min	Max[1]
5° C	50%	10 Hours	20 Hours	7 Days	20 Hours	7 Days
10° C	50%	7.5 Hours	15 Hours	7 Days	15 Hours	7 Days
15° C	50%	5 Hours	10 Hours	7 Days	10 Hours	7 Days
25° C	50%	2.5 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.

[1]**If the maximum overcoat interval is exceeded then the surface MUST be abraded to ensure maximum intercoat adhesion.**

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SPREADING RATE
With **Quickturn® 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.

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TYPICAL SYSTEMS

This is a guide only and is 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 AS2312.1 Table C1 System EVH3	Abrasive blast clean AS1627.4 Class 3.0	1st Coat 2nd Coat	Duremax® GFX Duremax® GFX	250 µm 250 µm
STEEL – NEW	Very high corrosivity (AS2312.1 Cat C5) Exceeds System EHB6	Abrasive blast clean AS1627.4 Class 2.5	1st Coat 2nd Coat 3rd Coat	Zincanode® 402 Duremax® GFX Duremax® GFX	75 µm 250 µm 250 µm
STEEL – NEW	Very high corrosivity (AS2312.1 Cat C5) System EVH3	Abrasive blast clean AS1627.4 Class 2.5	1st Coat 2nd Coat 3rd Coat	Durepon® EZP Duremax® GFX	75 µm 400 µm
STEEL – MAINTENANCE	Exterior	Power tool clean AS1627.2 St 3 or Abrasive blast AS1627.4 Class 2	1st Coat 2nd Coat	Duremax® GFX Duremax® GFX	250 µm 250 µm
CONCRETE	Exterior/Interior	Remove release agents and other surface contaminants, mechanically abrade as described below. Fill bugholes/resurface as needed.	Filler 1st Coat 2nd Coat	Luxepoxy® Filler Duremax® GFX (Thin 10-15%) Duremax® GFX	250 µm 250 µm

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

SURFACE PREPARATION

Steel: Round off all rough welds, sharp edges and remove weld spatter. Remove contaminants in accordance with AS1627.1. Oils, grease, and dirt/debris can be removed 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. Assess surface preparation compliance by using photographic examples laid out in ISO 8501-1.

Immersed steel: Abrasive blast cleaned to AS1627.4 Class 3. Remove all dust by brushing or vacuum cleaning. Assess surface preparation compliance by using photographic examples as laid out in ISO 8501-1.

Steel where abrasive blast cleaning is not viable/Steel Maintenance: Remove contaminants per AS1627.1. Remove deleterious matter such as rust, mill scale, oxide deposits and loose old paint films on metal surfaces by power tool cleaning according to AS1627.2. Assess surface preparation compliance by using photographic examples as laid out in ISO 8501-1 & ISO 8501-2. Coating performance is proportional to the degree of surface preparation. Feather back edges to remove ridges. Thoroughly and uniformly abrade the entire surface of tightly adhering the remaining coating to provide a suitable key for the new coating system. Remove all residues. Spot prime bare steel. See overcoating instructions within this document and comply with testing before overcoating.

Concrete: Diamond grind, track or light shot-blast concrete floors to provide a suitable profile for the intended surface, ICRI CSP 2-3 for floors, ICRI CSP 5-6 for concrete tanks. Remove all dust by vacuum cleaning. Fill any large cracks or voids using Luxepoxy® Filler.

*Allow new concrete to cure a minimum of 28 days at 24°C. To minimise the risk of moisture interference, Dulux recommends the following two tests be performed before coating – ASTM F2659 – 10 "Standard Guide for Preliminary Evaluation of Comparative Moisture Condition of Concrete, Gypsum Cement and Other Floor Slabs and Screeds Using a Non-Destructive Electronic Moisture Meter"(moisture content not to exceed 6%) and ASTM D 4263 "Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method" (no visible moisture present). If there is any concern about moisture problems with the concrete slab, or for projects greater than 500m2, at least one of the following more accurate quantitative test methods should be used - ASTM F 1869 "Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride" (moisture vapour transmission should not exceed 1.4 kilograms (3 pounds) per 93 square metres (1,000 square feet) in 24 hours), ASTM F 2170 "Standard Test Method for Determining Relative Humidity in Concrete using in situ Probes" (as referred to in AS 1884-2012, relative humidity should be less than 75%) Note: The testing listed above cannot guarantee avoidance of future moisture related problems particularly with existing concrete slabs. This is especially true if the use of an under-slab moisture vapour barrier cannot be confirmed or concrete contamination from oils, chemical spills, unreacted silicates, chlorides, or Alkali-Silica Reaction (ASR) is suspected.

APPLICATION

Mix each can thoroughly using a power mixer until the contents are uniform. Mix the contents of both packs thoroughly with a power mixer. Box all containers before use to ensure colour consistency. Remix thoroughly before application.

APPLICATION EQUIPMENT

Airless Spray: Graco 60:1 with 220cc lower or equivalent. Thinning is not normally required but up to 50 ml/litre or 5% of Dulux® Epoxy Thinner (920-08925) may be added to aid application in warmer application conditions to improve flow. Apply in multiple wet coats overlapping each pass 50%.

Tip Orifice	Atomising Pressure	Mat'l Hose ID	Pump Manifold Filter
0.019" – 0.023" (48 - 53 microns)	4,500– 5,000 psi (310 – 345 bar)	3/8"" or 1/2"" (9.5 mm or 12.7mm)	60 mesh (250 microns)

NOTE: Depending upon the distance of the pump to the structure being coated, consideration should be given to starting with one length of ½" first coming off the pump, then moving forward with 3/8" for the majority of the line, then a ¼" whip line for ease of spray application. A 2 metre x ¼" (6.35mm) whip hose is allowed at the end of the material hose for greater ease of application. Spray gun recommendations include either a Graco XTR7 or XHF. Remove the spray gun filter on XTR 7.

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APPLICATION EQUIPMENT

Airless Spray: Graco 60:1 with 220cc lower or equivalent. Thinning is not normally required but up to 50 ml/litre or 5% of Dulux® Epoxy Thinner (920-08925) may be added to aid application. Apply in multiple wet coats overlapping each pass 50%.

Tip Orifice	Atomising Pressure	Mat'l Hose ID	Pump Manifold Filter
0.019" – 0.023" (48 - 53 microns)	4,500– 5,000 psi (310 – 345 bar)	3/8"" or 1/2"" (9.5 mm or 12.7mm)	60 mesh (250 microns)

NOTE: Depending upon the distance of the pump to the structure being coated, consideration should be given to starting with one length of ½" first coming off the pump, then moving forward with 3/8" for the majority of the line, then a ¼" whip line for ease of spray application. A 2 metre x ¼" (6.35mm) whip hose is allowed at the end of the material hose for greater ease of application. Spray gun recommendations include either a Graco XTR7 or XHF. Remove the spray gun filter on XTR 7.

Air Spray: Graco Triton 308 or equivalent. Thinning is not normally required but up to 100 ml/litre or 10% of Dulux® Epoxy Thinner (920-08925) may be added to aid application. Apply in multiple wet coats overlapping each pass 50%.

Gun	Fluid Tip	Air Cap	Air Hose ID	Mat'l Hose ID	Atomising Pressure	Material Pressure
Graco Air Pro or Equivalent	2.2 mm (0.086)	Graco 192318	5/16" or 3/8 " (7.9 or 9.5 mm)	3/8" or 1/2" (9.5 or 12.7 mm)	60 to 70 PSI (4.14 – 4.83 Bar)	25 to 40 PSI (1.72 – 2.76 Bar)

NOTE: Low temperatures and/or long hose lengths require higher material pressure.

Roller: Thin 10% to 15% with Dulux® Epoxy Thinner (920-08925). Recommended for small touch-up areas only. Use 10 mm to 20 mm synthetic woven nap covers. Note: Two or more coats may be required to obtain recommended film thicknesses.

Brush: Thin 10% to 15% with Dulux® Epoxy Thinner (920-08925). Recommended for small touch-up areas only. Use high-quality natural or synthetic bristle brushes. Note: Two or more coats may be required to obtain recommended film thicknesses.

PRECAUTIONS

This is an industrial product designed for use by experienced protective coatings applicators. Where conditions may require variation from the recommendations on this Product Data Sheet contact your nearest Dulux® Consultant for advice before 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 a Standard hardener or below 5°C when using a Cold Cure and QuickTurn® Hardener. Do not apply at relative humidity above 85% or when the surface is less than 3°C above the dewpoint. When used with a white or pastel colour the Cold Cure and Quickturn hardener will impart a yellow tone that will darken with time. When used for immersion conditions the maximum overcoat interval is 3 days at 25°C. The coating MUST be completely solvent-free before being placed under immersion conditions as a tank lining. 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 the loss of some of the coating, but this will not affect performance..Use of fast or low-temperature hardeners may result in increased yellowing and a reduction of gloss level. Consult a Dulux Protective Coatings Consultant for immersion use.

CLEAN UP

Clean all equipment with Dulux® Epoxy Thinner (920-08925) immediately after use.

OVERCOATING

For atmospheric service: Assess the condition of aged coatings and the viability of an overcoat system in accordance with the latest versions of SSPC TU No.3, ASTM D 5064, and ASTM D 5065. Consult your local Dulux® Protective Coatings Consultant for specific surface preparation and coating system recommendations.

SAFETY PRECAUTIONS

Read the Technical 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 a 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 the risk of inhalation of spray mists exists, wear a 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 are coated with this paint. Grind off the coating before welding.

COMPANY INFORMATION

Dulux Protective Coatings is 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 2733