

QUANTUM[®] FX

Recoatable Gloss Metallic Polyurethane Finish

PC 430

- FEATURES**
- EXCELLENT APPLICATION PROPERTIES BY SPRAY
 - OUTSTANDING WEATHERING AND CHEMICAL RESISTANCE WITH QUANTUM[®] CLEARCOAT
 - TINTABLE METALLIC RANGE
 - TWO FINISHES AVAILABLE - FINE AND COARSE METALLIC

USES QUANTUM[®] FX is a premium quality, bright metallic two-pack acrylic polyurethane in a range of 60 brilliant colours. Designed for areas requiring visual impact, QUANTUM[®] FX offers two striking finishes - fine and coarse metallic.

QUANTUM[®] FX exhibits outstanding long term exterior durability and gloss retention when topcoated in QUANTUM[®] Clearcoat, and is easily recoatable with minimal surface preparation. Ideal for almost any substrate and situation, QUANTUM[®] FX will complement architectural features such as awnings, columns, commercial facades, lifts and joinery in retail spaces, lobbies, reception areas and showrooms.

SPECIFICATIONS

RESISTANCE GUIDE

WEATHERABILITY	Outstanding gloss and colour retention when topcoated with Quantum Clearcoat	SOLVENTS	Excellent resistance to splash and spillage of aromatic and aliphatic hydrocarbon solvents, common alcohols, esters and ketones
HEAT RESISTANCE	Up to 120°C dry heat	WATER	Excellent resistance to fresh and salt water but not suitable for immersion
SALTS	Very good resistance to neutral and alkaline salt solutions	ALKALIS	Good resistance to splash and spillage of most common alkalis
ACIDS	Good resistance to splash and spillage of mild acids	ABRASION	Good when fully cured

TYPICAL PROPERTIES AND APPLICATION DATA

CLASSIFICATION	Acrylic polyurethane coating	APPLICATION CONDITIONS			
FINISH	Gloss (Fine), Low Gloss (Coarse)		Min	Max	
COLOUR	60 tinted metallic colours	Air Temp.	10°C	45°C	
		Substrate Temp.	10°C	45°C	
		Relative Humidity		85%	
		Concrete Moisture		<10%	
COMPONENTS	Two	COATING THICKNESS (MICRONS)			
VOLUME SOLIDS	45%		Min	Max	Recommended
VOC LEVEL	<470 g/L (Fine Bright Base, untinted)	Wet film per coat (µm)	80	150	120
FLASH POINT	24°C	Dry film per coat (µm)	35	70	55
POT LIFE	2 hours (4L, 25°C)	SUITABLE SUBSTRATES	Suitably primed steel, aluminium, MDF, galvanised steel, concrete, compressed fibre cement or fibreglass		
MIXING RATIO V/V	Part A : 3 Part B : 1	PRIMERS	Most Dulux [®] two pack epoxy primers and selected single pack primers		
THINNER – BRUSH	965-42166 Duthin [®] 040	TOPCOATS	Dulux [®] Quantum Clearcoat Gloss		
THINNER – SPRAY	965-42166 Duthin [®] 040 965-63023 Dulux [®] Urethane Thinner	APPLICATION METHODS	Conventional spray and HVLP spray		
PRODUCT CODE	722-87364 Fine Bright Base 722-87365 Fine Dark Base 722-87374 Coarse Bright Base 722-87375 Coarse Dark Base 976-87350 Standard Hardener				

DRYING CHARACTERISTICS AT 55 µm DRY FILM THICKNESS*

Temperature	Humidity	Touch	Handle	Full Cure	OVERCOAT	
					Min	Max
25° C	50%	40 minutes	7 Hours	7 Days	7 Hours	Extended

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

SPREADING RATE 8.2 square metres per litre equals 55 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.

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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) Exceeds System PUR5	Abrasive blast clean AS1627.4 Class 2.5	1 st Coat Zincanode [®] 402 2 nd Coat Duremax [®] GPE MIO 3 rd Coat Quantum [®] FX 4 th Coat Quantum [®] Clearcoat	75 µm 200 µm 55 µm 45 µm
STEEL – NEW	High corrosivity (AS2312.1 Cat C4) Exceeds System PUR3	Abrasive blast clean AS1627.4 Class 2.5	1 st Coat Duremax [®] GPE ZP 2 nd Coat Duremax [®] GPE 3 rd Coat Quantum [®] FX 4 th Coat Quantum [®] Clearcoat	125 µm 125 µm 55 µm 45 µm
STEEL – NEW	Low – Interior (AS2312.1 Cat C1-2) Exceeds System PUR2	Abrasive blast clean AS1627.4 Class 2.5	1 st Coat Duremax [®] GPE ZP 2 nd Coat Quantum [®] FX 3 rd Coat Quantum [®] Clearcoat	125 µm 55 µm 45 µm
CONCRETE	Exterior/Interior	Remove release agents and other surface contaminants	1 st Coat Durebild [®] STE 2 nd Coat Quantum [®] FX 3 rd Coat Quantum [®] Clearcoat	125 µm 55 µm 45 µm
HARDWOOD & MDF	Interior	Sand and dust down before and after first coat	1 st Coat Luxepoxy [®] 4 White Primer 2 nd Coat Quantum [®] FX 3 rd Coat Quantum [®] Clearcoat	50 µm 55 µm 45 µm
ALUMINIUM & FIBREGLASS	Exterior/Interior	Clean, degrease and abrade surface	1 st Coat Luxepoxy [®] 4 White Primer 2 nd Coat Quantum [®] FX 3 rd Coat Quantum [®] Clearcoat	50 µm 55 µm 45 µm
FIBRE CEMENT SHEET	Exterior/Interior	Clean, degrease and lightly sand surface. Dust down.	1 st Coat Luxepoxy [®] 4 White Primer 2 nd Coat Quantum [®] FX 3 rd Coat Quantum [®] Clearcoat	50 µm 55 µm 45 µm
PLASTERBOARD*	Interior	Dust down. Ensure plasterboard joints are finished completely level and smooth.	1 st Coat Dulux [®] Oil Based Undercoat 2 nd Coat Quantum [®] FX 3 rd Coat Quantum [®] Clearcoat	50 µm 55 µm 45 µm

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

Appearance may greatly differ depending on application method (brush, roller and spray).

*Plasterboard surfaces may move and crack, particularly at the joints. Quantum[®] FX is not sufficiently flexible to be suitable over areas prone to movement, therefore, ensure that any substrate movement is borne by expansion joints. Do not apply Quantum FX over expansion joints.

SURFACE PREPARATION	Specifiers should follow the surface preparation guidelines from the data sheet for the primer or first coat selected. The surface must be clean, sound and free from moisture, grease, oil, dirt, rust, loose paint, and other contaminants and abraded to provide a suitable key for the coating system. If application of the second coat has exceeded the recoat window of the first coat (refer to data sheet) then the entire surface MUST be abraded.
	<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 with a blast profile of 40 – 70 microns. Remove all dust brushing or vacuum.</p> <p>Non-ferrous metals: Round off all sharp edges. Remove grease, oil and other contaminants in accordance with AS1627.1. Whip blast with fine non-metallic media such as plastic, glass or garnet to provide a key. Remove all dust with compressed air. Alternatively, degrease and abrade the surface with a non-metallic abrasive pad wetted with Gamlen CA 1 (a free-rinsing, alkaline detergent) and water. Rinse thoroughly with fresh potable water.</p> <p>Concrete: Concrete must be at least 28 days old before coating. Remove curing compounds, oil, grease and other oily contaminants with Gamlen CA 1 (according to the manufacturer's written instructions and all safety warnings). Remove all laitance and loose material. Fill any large cracks or voids using Luxepoxy[®] Filler.</p> <p>CFC Sheet: Sand thoroughly and remove all dust. To prevent moisture ingress and delamination of the coating system, prime and paint all sides of the panel.</p> <p>MDF and hardwood: Sand thoroughly and remove all dust. Resand lightly after priming to remove raised fibres. To prevent bowing, prime all sides of the panel.</p> <p>For best results, the primer surface must be smooth and free of any defects. When sanding work from coarse to fine grades of paper to avoid sanding marks in the finish.</p>

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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 and during application to prevent settling of the metallic pigment.												
BRUSH/ROLLER	Suitable for small areas only. Thin with up to 100 ml/litre with Duthin [®] 040 (965-42166) to aid application. When brushing and rolling additional coats may be required to attain the specified thickness and full opacity. Colour and appearance are dependent on thinning levels and application technique. The effect achieved will differ from that obtained by spray application.												
CONVENTIONAL SPRAY	Up to 200ml/litre Dulux [®] Urethane Thinner (965-63023) can be used to aid atomisation and control the metallic effect achieved. Apply in multiple wet on wet coats overlapping each pass 50%. Colour and appearance are dependent on thinning levels, film build, spraying technique and gun set-up. Between two and four wet on wet coats are required to achieve opacity for the tinted colours. A short flash time of approximately two minutes is required between coats. <table border="0"> <tr> <td>Typical Set-up</td> <td>Graco AirPro:</td> <td>1.4mm (239542)</td> </tr> <tr> <td></td> <td>Pressure at Triton 308:</td> <td>65-100 kPa (10-15 p.s.i.)</td> </tr> <tr> <td></td> <td>Pressure at Gun:</td> <td>385-420 kPa (55-60 p.s.i.)</td> </tr> <tr> <td></td> <td>HVLP:</td> <td>1.4 Fluid Tip Set</td> </tr> </table>	Typical Set-up	Graco AirPro:	1.4mm (239542)		Pressure at Triton 308:	65-100 kPa (10-15 p.s.i.)		Pressure at Gun:	385-420 kPa (55-60 p.s.i.)		HVLP:	1.4 Fluid Tip Set
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AIRLESS SPRAY	Not recommended												
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. Ensure that you read and understand the safety precautions on the Material Safety Data Sheets for the two components before using. The recommended thinner MUST be used as some solvents react with the isocyanate hardener seriously degrading the life of the coating. Under no circumstances should water or non-recommended thinner be allowed to contaminate the product. Colour and appearance are dependent on thinning levels, film build, application method and technique. Control of these parameters is especially important when coatings are used on cladding. Do not use this product for this application without reference to a Dulux [®] Protective Coatings representative. For the same tint formula there will be a difference in colour between the Fine and Coarse metallic finishes. This is due to the different sized aluminium flakes reflecting a different amount of light making the colour appear darker or lighter. In hot conditions use Duthin [®] 040 (965-42166) for improved flow and to reduce dry spray.												
CLEAN UP	Clean all equipment with Dulux [®] Urethane Thinner (965-63023) 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 must be worn while handling. Always wash hands before smoking, eating, drinking or using the toilet. Gas is evolved when isocyanate in the hardener reacts with water. If a closed container shows signs of internal pressure, cover it completely with a cloth and remove the lid slowly to prevent splashing or violent expulsion of the lid.												
USING	Use with good ventilation and avoid inhalation of spray mists and fumes. When spraying, wear a positive-pressure, air-supplied respirator. Users must always comply with the provisions of the respective State Spray Painting Regulations at all times.												
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 4 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	1.28 kg/litre (Average of components)
		DANGEROUS GOODS	Part A: Class 3 UN 1263 Part B: Class 3 UN 1263

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