

# QUANTUM<sup>®</sup> FX

Recoatable Gloss Metallic Polyurethane Finish

**PC 430**

- FEATURES**
- OUTSTANDING WEATHERING AND CHEMICAL RESISTANCE
  - EXCELLENT APPLICATION PROPERTIES
  - TINTABLE METALLIC RANGE
  - TWO FINISHES AVAILABLE - FINE AND COARSE METALLIC

**USES** QUANTUM<sup>®</sup> FX is a premium quality, gloss, metallic, two-pack acrylic polyurethane that offers a range of brilliant modern tinted colours. Designed for locations requiring visual impact, whilst maintaining aesthetics, it achieves amazing results through two finishes - fine and coarse metallic. QUANTUM<sup>®</sup> FX has been designed for superior weathering and gloss retention, while displaying the advantage of being recoatable with minimal surface preparation. Ideal for almost any substrate and situation, QUANTUM<sup>®</sup> FX will compliment structures such as awnings, cafes, bridgework, sporting and shopping complexes, lifts and furniture.

**SPECIFICATIONS**

**RESISTANCE GUIDE**

<b>HEAT RESISTANCE</b>	Up to 120°C dry heat.	<b>ALKALIS</b>	Good resistance to splash and spillage of most common alkalis.
<b>WEATHERABILITY</b>	Excellent gloss and colour retention on exterior exposure.	<b>SALTS</b>	Unaffected by splash and spillage of most salt solutions.
<b>SOLVENTS</b>	Unaffected by splash and spillage of common alcohols, aliphatic and aromatic hydrocarbons, esters and ketones.	<b>WATER</b>	Excellent resistance to fresh and salt water but not suitable for immersion.
<b>ACIDS</b>	Suitable for splash and spillage exposure to most acids.		

**TYPICAL PROPERTIES AND APPLICATION DATA**

<b>CLASSIFICATION</b>	Acrylic polyurethane coating	<b>APPLICATION CONDITIONS</b>	Min	Max	
<b>FINISH</b>	Gloss	Air Temperature	10°C	45°C	
<b>COLOUR</b>	Selected tinted metallic colours.	Substrate Surface Temperature	10°C	45°C	
		Relative Humidity		85%	
<b>COMPONENTS</b>	Two		Min	Max	Recom.
<b>SOLIDS BY VOLUME</b>	45%	Wet film per coat (microns)	80	150	120
<b>VOC LEVEL</b>	<470 g/L (Fine Bright Base, untinted)	Dry film per coat (microns)	35	70	55
<b>FLASH POINT</b>	24°C				
<b>POT LIFE</b>	2 hours (4L, 25°C)	<b>SUITABLE SUBSTRATES</b>	Suitably primed steel, aluminium, zinc coated steel, concrete, fibreglass or MDF.		
<b>MIXING RATIO (V/V)</b>	Part A : 3      Part B : 1	<b>PRIMERS</b>	Epoxy primers, etch primers and universal metal primers.		
<b>THINNER</b>	<b>Brush</b> 965-42166      DUTHIN <sup>®</sup> 040	<b>APPLICATION METHODS</b>	Conventional spray and HVLP spray.		
	<b>Spray</b> 965-42166      DUTHIN <sup>®</sup> 040				
	965-63023      Dulux <sup>®</sup> Urethane Thinner				
<b>PRODUCT CODE</b>	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 microns dry film thickness**

Standard Hardener	Temperature	Humidity	Touch	Handle	Full Cure	Overcoat	
						Min	Max
	25° C	50%	40 minutes	7 Hours	7 Days	7 Hours	Indefinite

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

**TYPICAL SPREADING RATE AT RECOMMENDED DRY FILM BUILD**

A spreading rate of 8.2 sq. metres per litre corresponds to 55 microns dry film thickness assuming no losses. Practical spreading rates will vary depending on such factors as method and conditions of application and surface roughness.

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## TYPICAL SYSTEMS

(The typical systems are offered as a guide only and are not to be used as a specification. It is recommended that the specific needs of a project be discussed with a Dulux Protective Coatings Consultant.)

SURFACE	PREPARATION GUIDE	SYSTEM		DRY FILM THICKNESS
STEEL	Abrasive blast AS1627.4 Class 2.5	1st Coat	DUREPON® P14	75 Microns
		2nd Coat	QUANTUM® FX	55 Microns
		3rd Coat	QUANTUM® Clearcoat (Clearcoat optional)	45 Microns
		1st Coat	DUREMAX™ GPE ZP	125 Microns
		2nd Coat	QUANTUM® FX	55 Microns
		3rd Coat	QUANTUM® Clearcoat (Clearcoat optional)	45 Microns
		1st Coat	ZINCANODE® 402	50 Microns
		2nd Coat	DUREMAX™ GPE	125 Microns
		3rd Coat	QUANTUM® FX	55 Microns
		4th Coat	QUANTUM® Clearcoat (Clearcoat optional)	45 Microns
CONCRETE	Acid etch, or sweep blast. Dust off, wash clean with water and allow to dry.	1st Coat	LUXEPOXY® 4 White Primer	50 Microns
		2nd Coat	QUANTUM® FX	55 Microns
		3rd Coat	QUANTUM® Clearcoat (Clearcoat optional) (Thin first coat 10-15%)	45 Microns
HARDWOOD MDF	Sand and dust down before and after first coat.	1st Coat	DUREPON® Sandable Primer	60 Microns
		2nd Coat	QUANTUM® FX	55 Microns
		3rd Coat	QUANTUM® Clearcoat (Clearcoat optional)	45 Microns
ALUMINIUM FIBREGLASS	Clean, degrease and abrade surface	1st Coat	DUREPON® Sandable Primer	60 Microns
		2nd Coat	QUANTUM® FX	55 Microns
		3rd Coat	QUANTUM® Clearcoat (Clearcoat optional)	45 Microns
COMPRESSED FIBRO CEMENT	Dust down before painting.	1st Coat	DUREPON® Sandable Primer	50 Microns
		2nd Coat	QUANTUM® FX	55 Microns
		3rd Coat	QUANTUM® Clearcoat (Clearcoat optional)	45 Microns

**Using QUANTUM® Clearcoat over QUANTUM® FX tinted metallic colours will result in a striking finish with spectacular depth of image. The Clearcoat will give rise to a high gloss, wet looking finish as well as improving weatherability and resistance to graffiti removal solutions.**

### SURFACE PREPARATION

It is recommended that specifiers follow the guidelines for surface preparation from the data sheet for the primer selected. The primer surface must be free from grease, oil, dirt and other loosely adhering materials. For best appearance of the finish 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.

### APPLICATION

Stir contents of each can thoroughly with a broad flat stirrer using a stirring, lifting action or use a power mixer. Ensure bases have been tinted to the correct colour before use – DULUX ASSUMES NO RESPONSIBILITY FOR THE APPLICATION OF AN 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 using.

### BRUSH/ROLLER

Suitable for small areas only. Where larger areas are involved, application is improved by the addition of up to 100 ml/litre of DUTHIN® 040 (965-42166). When brushing and rolling additional coats may be required to attain 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 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.

#### Typical Set-up

Graco Delta Gun: 1.4mm (239542)  
Pressure at Pot: 65-100 kPa (10-15 p.s.i.)  
Pressure at Gun: 385-420 kPa (55-60 p.s.i.)

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## 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<sup>®</sup> representative for advice prior to painting. Do not apply in conditions outside the parameters stated in this document without the express written consent of Dulux<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> 040 (965-42166) for improved flow and to reduce dry spray.

## CLEAN UP

Clean all equipment with Dulux<sup>®</sup> Urethane Thinner (965-63023) immediately after use.

## OVERCOATING

Aged coating should be tested for lifting by a method appropriate for the coating thickness, for example 'X' cut or cross-hatch methods. If it lifts, remove it. The surface must be free of oil, grease and other contaminants. High-pressure water wash at 8.3 to 10.3 MPa (1,200 - 1,500 p.s.i.) to remove loosely adhering chalk and dust. Abrasion may be required depending on surface condition.

## SAFETY PRECAUTIONS

**Read Data Sheet, Material Safety Data Sheet and any precautionary labels on containers.**

## 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. 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. If risk of inhalation of spray mists exists, wear a positive-pressure, air-supplied respirator. When spray painting, users should comply with the provisions of the 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<sub>2</sub> 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.

**MATERIAL SAFETY DATA SHEET is available from Customer Service (132377) or [www.duluxprotectivecoatings.com.au](http://www.duluxprotectivecoatings.com.au)**

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PACKAGING	Available in 4 litre packs
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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