QUANTUM® V90

High Durability Fluoropolymer Finish — PC 436

FEATURES

- BASED ON FLUOROPOLYMER CHEMISTRY FOR OUTSTANDING DURABILITY
- CAN BE APPLIED UP TO 125 MICRONS DFT IN A SINGLE COAT VIA SPRAY APPLICATION
- GOOD CHEMICAL & ABRASION RESISTANCE
- MEDIUM HARDENER AVAILABLE FOR USE IN COOLER CONDITIONS
- EXCELLENT APPLICATION PROPERTIES
- EXCELLENT GRAFFITI RESISTANCE

USES

QUANTUM® V90 is an ultra-premium quality, high gloss two-pack fluoropolymer topcoat that has been designed to deliver superior weathering and gloss retention in areas of extreme UV radiation. QUANTUM® V90 imparts a premium quality finish for high demand areas such as commercial facades, road and rail infrastructure, retail complexes, high rise offices and apartments. The long exterior durability of QUANTUM® V90 reduces cost for the asset owner by significantly extending the time maintenance is required.

QUANTUM® V90, when fully cured, exhibits excellent graffiti resistance and is ideal for public areas prone to graffiti attack such as sporting facilities, public transport and retail facades.

SPECIFICATIONS AS/NZS 3750.6

RESISTANCE GUIDE

WEATHERABILITY	Outstanding gloss and colour retention on exterior exposure	**SOLVENTS**	Very good resistance to splash and spillage of common alcohols, aliphatic and aromatic hydrocarbons, 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	Unaffected by splash and spillage of most salt solutions	**ALKALIS**	Good resistance to splash and spillage of most common alkalis
ACIDS	Suitable for splash and spillage exposure to most acids	**ABRASION**	Excellent when fully cured

TYPICAL PROPERTIES AND APPLICATION DATA

CLASSIFICATION	Modified fluoropolymer
FINISH	Gloss or Satin
COLOUR	Wide range of colours available made to order
COMPONENTS	Two
VOLUME SOLIDS	62% (White)
VOC LEVEL	<335 g/L (White)
FLASH POINT	22°C
POT LIFE	2 hours (4 Litre kit, 25°C) using 976-H0186 Standard Hardener
MIXING RATIO V/V	Part A : 4 Part B : 1
THINNER – BRUSH	965-82095 Duthin® 700
THINNER – SPRAY	965-82095 Duthin® 700
PRODUCT CODE	726-LINE Part A (MTO colour) 976-H0186 Standard Hardener 976-H0198 Medium Hardener

APPLICATION CONDITIONS

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

COATING THICKNESS (MICRONS)

	Min	Max	Recommended
Wet film per coat (µm)	80	200	120
Dry film per coat (µm)	50	125	75

SUITABLE SUBSTRATES	Suitably primed steel, aluminium, galvanised steel, MDF and concrete
PRIMERS	Most Dulux® two pack epoxy primers
TOPCOATS	Not applicable
APPLICATION METHODS	Brush, roller, conventional, airless spray or air assisted spray

DRYING CHARACTERISTICS AT 75 µm DRY FILM THICKNESS* (STANDARD HARDENER)

					OVERCOAT	
Temperature	**Humidity**	**Touch**	**Handle**	**Full Cure**	**Min**	**Max[1]**
15° C	50%	8 Hours	36 Hours	10 Days	4 Hours	3 Days
25° C	50%	4 Hours	24 Hours	7 Days	2 Hours	3 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.**

SPREADING RATE
with Standard Hardener
assuming no losses

8.3 square metres per litre equals 75 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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MEDIUM HARDENER

COATING THICKNESS (MICRONS)

	Min	Max	Recommended
Wet film per coat (µm)	80	200	120
Dry film per coat (µm)	50	125	75

SOLIDS BY VOLUME	62% (White)
VOC LEVEL	<335 g/L (White)
POT LIFE	1.5 Hours (4 Litre kit, 25°C)

APPLICATION CONDITIONS

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

DRYING CHARACTERISTICS AT 75 µm DRY FILM THICKNESS* (MEDIUM HARDENER)

					OVERCOAT	
Temperature	**Humidity**	**Touch**	**Handle**	**Full Cure**	**Min**	**Max[1]**
15° C	50%	6 Hours	27 Hours	10 Days	3 Hours	3 Days
25° C	50%	3 Hours	18 Hours	7 Days	90 Minutes	3 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.**

SPREADING RATE
with Fast Cure Hardener
assuming no losses

8.3 square metres per litre equals 75 µm dry film thickness
NOTE: Practical spreading rates will vary depending on such factors as application method, ambient conditions, 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) Exceeds System PUR5	Abrasive blast clean AS1627.4 Class 2.5	1st Coat 2nd Coat 3rd Coat	Zincanode® 402 Duremax® GPE MIO Quantum® V90	75 µm 200 µm 100 µm
STEEL – NEW	High corrosivity (AS2312.1 Cat C4) Exceeds System PUR3	Abrasive blast clean AS1627.4 Class 2.5	1st Coat 2nd Coat 3rd Coat	Duremax® GPE ZP Duremax® GPE Quantum® V90	125 µm 125 µm 100 µm
CONCRETE	Exterior/Interior	Remove release agents and other surface contaminants	1st Coat 2nd Coat	Durebild® STE Quantum® V90	125 µm 100 µm
HARDWOOD & MDF	Interior	Sand and dust down before and after first coat	1st Coat 2nd Coat 3rd Coat	Luxepoxy® 4 White Primer Quantum® V90 Quantum® V90	50 µm 50 µm 50 µm
ALUMINIUM & FIBREGLASS	Exterior/Interior	Clean, degrease and abrade surface	1st Coat 2nd Coat 3rd Coat	Luxepoxy® 4 White Primer Quantum® V90 Quantum® V90	50 µm 50 µm 50 µm
FIBRE CEMENT SHEET	Exterior/Interior	Clean, degrease and lightly sand surface. Dust down.	1st Coat 2nd Coat 3rd Coat	Luxepoxy® 4 White Primer Quantum® V90 Quantum® V90	50 µm 50 µm 50 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).

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.

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.

Galvanised steel: Round off all rough welds, sharp edges, and zinc dags and remove weld spatter. Remove grease, oil and other contaminants in accordance with AS1627.1. Whip blast, taking care not to damage the galvanising layer. Remove all dust by 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. Fill any large cracks or voids using Luxepoxy® Filler.

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.

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.

MDF and hardwood: Sand thoroughly and remove all dust. Resand lightly after priming to remove raised fibres.

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APPLICATION	Mix each can thoroughly using a power mixer until the contents are uniform. Ensure product has 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.
BRUSH/ROLLER	Suitable for small areas only. Thin with up to 100 ml/litre with Duthin® 700 (965-82095) 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	Thin up to 150mL per litre with Duthin® 700 (965-82095) to aid atomisation.

Typical Set-up	Graco Delta Gun	1.4mm (239542)
	Pressure at Pot:	70-100 kPa (10-15 p.s.i.)
	Pressure at Gun:	380-410 kPa (55-60 p.s.i.)
	HVLP	1.4 Fluid Tip Set

AIRLESS SPRAY	Standard airless spray equipment such as a Graco 30:1 President with a fluid tip of 15 thou (0.38) 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 150 ml/litre of Duthin® 700 (965-82095) may be added to aid 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® Representative 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 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.
CLEAN UP	Clean all equipment with Dulux® Duthin 700 (965-82095) 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

Dulux Protective Coatings a division of

DuluxGroup (Australia) Pty Ltd
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PACKAGING, TRANSPORT AND STORAGE

PACKAGING	Available in 20 litre packs
TRANSPORTATION WEIGHT	1.35 kg/litre (Average of components)
DANGEROUS GOODS	Part A: Class 3 UN 1263 Part B: Class 3 UN 1263