

TECHNICAL DATA SHEET

UPS 503 XF Urethane Coating

Two Component Solvent Based Polyurethane Coating

UPS 503 XF Urethane Coating is a high performance polymeric coating system specifically developed for the long term cosmetic finish for use on a wide variety of surfaces used within the Construction and Petrochemical Industries, including concrete, steel, aluminium etc.

UPS 503 XF Urethane Coating is based on a unique blend of acrylic and urethane polymers reinforced with colour stable, chemical resistant pigments to produce a system which offers outstanding weather, abrasion, and chemical resistance, together with optimum gloss and colour stability.

UPS 503 XF Urethane Coating is totally unaffected by extreme levels of ultra violet light and offers outstanding protection to internal and external surfaces.

Before proceeding, please read the following information carefully to ensure that the correct application procedure is fully understood.

SURFACE PREPARATION

All surfaces should be previously coated with the appropriate UPS build up protection system.

All coated surfaces must be clean, dry and free from oil, grease and other contamination.

All build coats should be applied in accordance with their product tech sheet.

MIXING

UPS 503 XF Urethane Coating

is a two component material which must be mixed together prior to use.

The base component should be thoroughly stirred to incorporate any slight separation, whilst continuing stirring the contents of the activator container should be added. Continue stirring until a homogeneous mix is obtained.

The mixed material must be used within 2 hours of mixing at 20°C (68°F).

APPLICATION

Application should not be carried out when relative humidity exceeds 85% or when the surface to be coated is less than 3°C above the dew point. The minimum temperature for application is 2°C (36°F).

Brush: Good quality brushes should be used with even strokes, ensuring that the **UPS 503 XF Urethane Coating** is not overbrushed leading to less than the specified coating thickness.

Roller: Short pile mohair rollers are the preferred equipment for this application method. **UPS 503 XF Urethane Coating** should be spread evenly with regular checks made to ensure the correct uniform wet film thickness is achieved.

UPS 503 XF Urethane Coating

does not normally require thinning for brush/roller application. Where thinning is required **UPS Polyurethane Thinners** may be added.

Airless Spray: Typical spray settings are as follows:

Pump Ratio	32:1
Tip Size	0.013-0.015"
Tip Pressure	2000 psi

Excessively high tip spraying pressure should be avoided. The minimum pressure at the pump conducive to good atomisation should be used. **UPS 503 XF Urethane Coating** may require up to 10% **UPS Polyurethane Thinners** for airless spray application.

Conventional Spray: Most types of equipment are suitable.

Pressure Pot	
Needle Set Up	1.1 - 1.8mm

All equipment must be cleaned IMMEDIATELY after use with **UPS Universal Cleaner**.

Theoretical Coverage Rate

11.0 m²/litre at 50 microns dft (120 ft²/litre at 2.0 mils dft)

Recommended Film Thickness

Wet	90 microns (4 mils)
Dry	50 microns (2 mils)

Detailed working recommendations are available from the Technical Centre on request.

PHYSICAL CONSTANTS

Mixing Ratio 6 parts base to 1 part activator by volume.

Appearance Base Coloured Liquid
Activator Clear Liquid

Drying & Cure Times at 20°C (68°F)

Usable Life	2 hours
Touch Dry	1 hours
Hard Dry	4 hours
Minimum Overcoating	1 hours
Maximum Overcoating	24 hours
Full Cure	7 days

Volume Solids 56%

V.O.C. 383 gms/litre

Shelf Life Use within 2 years of purchase. Store in original sealed containers at temperatures between 5°C (40°F) and 30°C (86°F).

PHYSICAL PROPERTIES

Abrasion Resistance 25mgm weight loss over 500 cycles – 1kg load – CS10 wheel
ASTM D4060

Impact Resistance 1.5 joules
ASTM G14

Dry Heat Resistance 100°C (212°F)
ASTM D2485

Direct Pull Resistance 6.2Mpa (900 psi) – Steel 4Mpa (600 psi) – Concrete (Concrete Failure)
ASTM D4541

Pencil Hardness 2H
ASTM D3363

Salt Fog Resistance Excellent, unaffected after 5000hrs exposure
ASTM B117

Resistance to Artificial Weathering 500hrs, Loss of gloss – 14 gloss units (60° Head) 1-2units ΔE colour difference
BS3900: - F16 (ISO 11507)

Humidity Resistance Unaffected after 50 cycles
(BS 3900: - 8)(ISO 3231)

Scratch Resistance No failure 2.0kg load
(BS 3900: - E2)(ISO 1518)

HEALTH AND SAFETY

As long as normal good practice is observed **UPS 503 XF Urethane Coating** can be safely used.

Vapour masks should be worn for spray applications.

A fully detailed **Material Safety Data Sheet** is either included with the material or is available on request.

PACKAGING

Supplied in 3.5 & 17.5 litre packs.

COLOURS

Available in: white, black, grey, red, oranges, yellows & other selected colours subject to minimum bath quantities.

The information provided in this Product Data Sheet is intended as a general guide only and should not be used for specification purposes. The information is given in good faith but we assume no responsibility for the use made of the product or this information because this is outside the control of the company. Users should determine the suitability of the product for their own particular purposes by their own tests.



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