

TECHNICAL DATA SHEET

UPS 401 CR Epoxy Coating

Two Component Solvent Free Epoxy Coating

UPS 401 CR is a high performance solvent free coating designed for aggressive environments.

UPS 401 CR is based on a special liquid epoxy polymer reacted with a blend of amine and polyamino resins reinforced with inert pigments and silicas which produces a system with exceptional chemical and corrosion resistance.

UPS 401 CR offers excellent adhesion to steel and concrete and has outstanding abrasion and erosion resistance making it ideal for tanks, containment areas, steelwork and floors.

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

SURFACE PREPARATION

Steel Surfaces - All surfaces to be coated should be abrasive blast cleaned to a minimum Sa2½ in accordance with BS7079 Part A1:1989 or equivalent with a blast profile corresponding to 'Medium' in accordance with BS7079 Part C3 / ISO 8503 / 1. All loose abrasive dust and debris must be blown clear or vacuum cleaned away. Steel surfaces do not require priming but should be coated within 4 hours of blast cleaning to prevent rash rusting.

Concrete Surfaces - All concrete to be coated should either be lightly abrasive blast cleaned using wet or dry abrasive techniques or alternatively high pressure water jetting. Care must be taken not to expose the aggregate in the concrete. All dust and abrasive material shall be removed from the surface prior to coating.

Concrete surfaces should have a maximum content of 7% prior to any coating being applied.

Concrete surfaces should be primed with **UPS 902 SP Primer** or **UPS 904 GP Primer** in accordance with the product tech sheet.

MIXING

UPS 401 CR is a two component material comprising base and activator components which must be mixed together prior to use.

Stir the contents of the base component, continue stirring and gradually add the total contents of the activator container, stir the combined mix until completely homogeneous.

The mixed materials should be used within 45 minutes of mixing at 20°C (68°F). This time will be reduced at higher temperatures and extended at lower temperatures.

APPLICATION

Application should not be carried out at temperatures below 5°C nor when relative humidity exceeds 85% or when the surface to be coated is less than 3°C above the dew point.

UPS 401 CR is suitable for application by brush or roller, using good quality brushes or short to medium pile rollers.

On concrete surfaces it is important to stipple the **UPS 401 CR** into the primed surface to ensure goowetting of the surface.

For large applications **UPS 401 CR** can be applied by dual feed hot airless spray equipment, full technical details can be supplied on request from the **UPS Technical Centre**.

In areas requiring a slip deterrent finish, **UPS H.D.** or **W.D. Grip** should be incorporated into the first coat of a two coat system.

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

Theoretical Coverage Rate

4 m²/litre at 250 microns dft (43 ft²/litre at 10 mils dft)

Recommended Film Thickness

Wet 250 microns (10 mils)
Dry 250 microns (10 mils)

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

PHYSICAL CONSTANTS

Mixing Ratio 3.5 parts base to 1.5 part activator by volume
4 parts base to 1 part activator by weight

Appearance Base Viscous coloured liquid
Activator Clear Amber liquid

Drying & Cure Times at 20°C

Usable Life	45 minutes
Touch Dry	3-4 hours
Minimum Overcoating	3-4 hours
Maximum Overcoating	48 hours
Full Cure	7 days

Volume Solids 100%

V.O.C. Nil

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

PHYSICAL PROPERTIES

Abrasion Resistance	80 mgm loss per 1000 cycles -
ASTM D 4060	1 kg load - CS17 wheel
Impact Resistance	2.6 joules (23 in/lbs)
ASTM G14	
Heat Resistance	100°C (212°F) – Dry
ASTM D648	80°C (175°F) – Wet
Water Vapour Permeability	1.2g.mm/m ² /24hrs
ASTM D1653	
Salt Fog Resistance	Excellent, unaffected after
ASTM B117	5,000 hrs exposure
Humidity Resistance	Unaffected 5,000 hrs exposure
BS 3900 Part F2	
Direct Pull Adhesion	12Mpa (1760 psi) – grit blasted steel
ASTM D4541	
Cathodic Disbondment	Pass <6mm (¼ inch) (28 days at 20°C)
ASTM G8	

HEALTH AND SAFETY

As long as normal good practice is observed **UPS 162 CR Epoxy Coating** can be safely used.

Protective gloves should be worn.

Vapour masks should be worn for spray application.

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

PACKAGING

Supplied in 5 & 20 litre packs

COLOURS

Clear

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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