Technical Data Sheet

UniquePolymerSystems.com
The Engineer's Choice
... for Solutions

UPS 505 DWPU

UPS 505 DWPU is a high build solvent free urethane anticorrosive coating designed for the efficient long term protection of pipelines, pipe fittings and equipment. UPS 505 DWPU also meets the requirements of **BS6920:1990 as required by the Water Research Centre.**

Typical applications

Pipelines, water tanks, effluent systems, pumps, valves, marine structures, and potable water environments.

Surface Preparation

1. Metallic Substrates

All oil and grease must be removed from the surface to be coated using an appropriate cleaner such as MEK.

The surface should be abrasive blasted to Swedish Standard SA2.5 and a minimum blast profile of 75 microns using an angular abrasive. Once blast cleaned, the surface must be degreased and cleaned using MEK and all prepared surfaces must be coated before rusting or oxidation occur.

NOTE: For salt contaminated surfaces the area must be abrasive blast cleaned as above and left for 24 hours to allow any ingrained salts to come to the surface. After this period the surface must be washed with MEK prior to brush blasting to remove the surface salts. This process must be repeated until all ingrained salts have been sweated out of the surface and removed.

Where abrasive blast cleaning is not possible (excluding salt contaminated surfaces) the surface should be roughened by MBX, needle gun or grinding. Under these conditions adhesion levels will not be optimal although still satisfactory for most applications.

2. Concrete

Remove any contamination and lightly abrasive blast or scarify taking care not to expose the aggregate before application of UPS 405 CRSG. Allow new concrete to cure for a minimum of 21 days and likewise treat to remove any surface laitance before coating. For optimum results on damp concrete, condition with UPS 905 DS. Where the concrete is dry but highly porous, it is recommended to condition with UPS 904 GP.

Mixing and Application

Do not apply when the ambient or substrate temperature is less than 5°C or when the relative humidity is greater than 90%.

Application should normally be carried out by plural component heated airless spray using a 60:1 ratio pump with an input pressure of 50psi and a tip size of 0.019-0.025inches. Warm the base to up to 50°C and ensure that the mixed material is at a temperature of 35-40°C. Use as short a line as possible to maintain product temperature. The applied film thickness should be between 750 and 1000 microns and the practical coverage rate for spraying is 0.75 – 1.125 sq metres per litre. The mixing ratio is 3 to 1 by volume.

Small units are available for hand application.

Transfer the contents of the Activator container into the Base unit mixing thoroughly to ensure that the material is homogeneous and free of any streaks. From the commencement of mixing all of the material should be used within 15-20 minutes at 20°C. Where more time is required, the material should be cooled before mixing and during use or smaller volume mixes used. Apply in two coats by brush or roller at a practical coverage rate of 1.7sq metres per coat to give a film thickness of 500 microns per coat. The second coat can be applied as soon as the first layer is touch dry. The maximum over-coating time is 24 hours. Where this time is exceeded the surface should be abraded and the surface cleaned prior to over-coating.

Technical Data Sheet

UniquePolymerSystems.com
The Engineer's Choice
... for Solutions

Cure Times

At 20°C the applied materials should be allowed to harden for the times indicated below before being subjected to the conditions indicated. These times will be extended at lower temperatures and reduced at higher temperatures:

Usable life	15 - 20 minutes
Movement without load or immersion	2 hours
Light loading	4 hours
Full loading/water immersion	3 days
Chemical Contact	7 days

Technical Data and Performance

Tensile Strength (25°C) ASTM D1002	200 kg/ cm² (2850 psi)
Elongation at Break (25°C)	30%
Hardness Shore D ASTM D2240	80
Water Resistance (British Gas CW6 and FW0028 Draft methods).	Pass at 50°C
Cathodic Disbondment (British Gas CW6 and FW0028 Draft methods).	Pass
Impact resistance (British Gas CW6)	15 Joules
Flexibility (FW0028 Draft method)	3% Strain at 20°C - Pass 3% Strain at 5°C - Pass 3% Strain at 0°C - Pass
Corrosion Resistance (ASTM B117)	5000 hours

Storage Life

5 years if unopened and stored in normal dry conditions (15-30°C)

Health and Safety

Please ensure good practice is observed at all times during the mixing and application of this product. Protective gloves and other recommended personal protective equipment must be worn during the mixing and application of this product. Before mixing and applying the material please ensure you have read and fully understood the detailed Material Safety Data Sheet