

# Technical Data Sheet

## UPS 250 UWC Under Water Ceramic



UPS 250 UWC Under Water Curing Ceramic Lining is a flexibilised high build solvent free epoxy coating designed for application to wet surfaces or even underwater. The ceramic enhanced product provides outstanding adhesion to wet surfaces and long-term protection of steel and concrete structures against corrosion, abrasion and chemical attack. The material will cure down to 5°C (41°F) and is highly resistant to marine and industrial environments, buried conditions, ground water, effluents, salt water and a wide range of oils and chemicals.

### Product Features

- Designed for application by brush or applicator tool.
- Will cure in wet conditions and Under Water
- Outstanding resistance to a wide range of chemicals and operating environments.

### Product Applications

Subsea structures, pipelines, risers, splash zones, sheet and bearing piles, and other land and marine structures.

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

### Surface Preparation

The metallic surface to be coated must be free of any marine life such as algae or barnacles, any degraded coating or surface corrosion must be cleaned from the surface.

For the best results the underwater repair surface can be hydro-blasted at a minimum pressure of 3,000psi. This method of preparation will ensure the majority of surface contaminants will be cleaned from the surface. If there are any areas that still have surface contamination they will need to be chiseled clean prior to coating.

If it not possible to hydro-blast the surface, then handheld scrapers and chisels can be used to clean the surface. If possible a rough pad should be used to try and take away any loose coating or surface corrosion.

Please be aware that this type of surface preparation will reduce the performance of the coating.

### Mixing & Application

Warm the Base component to 15 – 25°C (60 – 77°F) before mixing and do not apply when the ambient or substrate temperature is below 5°C (40°F) or less than 3°C (37°F) above the dew point.

Transfer the contents of the Activator unit into the Base container and mix thoroughly until a uniform material free of any streaks is achieved. From the commencement of mixing the whole of the material should be used within 60 minutes at 20°C (68°F). For small volume mixes, the mixing ratio is 6.75:1 by weight.

The material has been designed to be applied to underwater surfaces in a single coat at a minimum film thickness of 1mm (40 mil).

Using the applicator tool provided the material should be pressed into the surface. Ensure you do not over work the coating once applied into the underwater surface, as a general rule if the coating has covered the repair area then leave it to cure. You can dress or smooth off the coating after a minimum of 4 hours after application using a gloved hand.



Unique Polymer Systems LTD,  
Unit 19, Link Business Centre,  
Link Way, Malvern, Worcestershire,  
WR14 1 UQ, United Kingdom,  
+ 44 (0) 1531 63 63 00  
[sales@uniquepolymersystems.com](mailto:sales@uniquepolymersystems.com)



# Technical Data Sheet

## UPS 250 UWC Under Water Ceramic

### Technical Data & Performance

#### Characteristics

##### Coverage Rates

1KG (2.2LB) of fully mixed product will give the following coverage rates -	
0.586m <sup>2</sup> at 1mm	7.35ft <sup>2</sup> at 40mil
<i>Please note that the coverage rates quoted are theoretical and do not take into consideration the profile or condition of the surface being repaired.</i>	

##### Drying & Cure Times at 20°C (68°F)

Useable Life	60 minutes
Movement Without Load or Immersion	6 hours
Light Loading	12 hours
Full Loading	4 days
Chemical Contact	7 days
<i>Once hardener, the material should be left for the following periods of time at 20°C (68°F) before being subjected to the conditions indicated. These times will be doubled at 10°C (50°F) and halved at 30°C (86°F)</i>	

##### Appearance

Mixed Material Colour	Thixotropic Aluminum Coloured Paste
Base Component Colour	Aluminum Coloured Paste
Activator Component	Amber Liquid

##### Shelf Life

5 years if unopened and store in normal dry conditions (15-30°C / 60-86°F)

##### Mixing Ratio

Component	Base	Activator
By Weight	6.75	1
By Volume	4	1

##### Density

Base	1.67
Activator	0.99
Mixed	1.54

##### Volume Capacity

649cc/Kg

##### Solids Content

100%

##### Slump Resistance

Nil at 400 microns

##### Pack Sizes

This product is available in the following pack sizes; 4LT (1 US Gallon)

##### Useable Life

10°C (50°F)	45 - 60 minutes
20°C (68°F)	45 minutes
30°C (86°F)	15 - 20 minutes

#### Mechanical Properties

Tensile Shear Adhesion ASTM D1002 (Abrasive Blasted Dry Mild Steel with 75 micron profile)	186kg/cm <sup>2</sup> (2,640 psi)
--	--------------------------------------

Tensile Shear Adhesion ASTM D1002 (Abrasive Blasted Wet Mild Steel with 75 micron profile)	174kg/cm <sup>2</sup> (2,470 psi)
--	--------------------------------------

Corrosion Resistance ASTM B117	Minimum 5000 hours
-----------------------------------	--------------------

Hardness Shore D ASTM D2240	75
--------------------------------	----

**Quality:** All Unique Polymer Systems LTD Products are supplied under the scopes of the company's fully documented quality system.

**Warranty:** Unique Polymer Systems LTD warrants that the performance of the product supplied will confirm to the typical descriptions quoted within this Technical Data Sheet provided the material is stored correctly and used according to the procedures detailed in the Technical Data Sheet for the material.

**Health & Safety:** Please ensure good practice is observed at all times during the mixing and application of this product. Protective gloves must be worn during the mixing and application of this product. Before mixing and applying the material please ensure you have read the fully detailed Material Safety Data Sheet.

**Legal Notice:** The data contained within this Technical Data Sheet is furnished for information only and is believed to be reliable at the time of issue. We cannot assume responsibility for results obtained by others over whose methods we have no control. It is the responsibility of the customer to determine the products suitability for use. Unique Polymer Systems LTD accepts no liability arising out of the use of this information or the product described herein.



Unique Polymer Systems LTD,  
Unit 19, Link Business Centre,  
Link Way, Malvern, Worcestershire,  
WR14 1 UQ, United Kingdom,  
+ 44 (0) 1531 63 63 00  
sales@uniquepolymersystems.com

