

## RESICHEM 511 UCEN

**Resichem 511 UCEN** is a high build solvent-free epoxy novalac coating designed to provide outstanding chemical and corrosion protection of steel and concrete structures. The coating is particularly resistant to attack by strong acids including 98% sulphuric acid.

### Typical applications

Chemical containment and bund areas    tank lining    pumps    chemical drains and channels  
Pipework

### Surface Preparation

#### 1. Metallic Substrates

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

For optimum performance, the surface should be abrasive blasted to **ISO 8501/4 Standard SA2.5 (SSPC SP10/ NACE 2)** and a minimum blast profile of 75 microns (3mil) using an angular abrasive. Once blast cleaned, the surface must be degreased and cleaned using MEK or similar type material. All surfaces must be coated before gingering or oxidation occurs.

**PLEASE NOTE:** For salt contaminated surfaces the area must be abrasive blast cleaned as mentioned above and left for 24 hours to allow any ingrained salts to come to the surface. After this 24 hour 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 contaminants have been sweated out of the surface.

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 Resichem 511 UCEN. 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 Resichem 505 Dampseal. Where the concrete is dry but highly porous, it is recommended to condition with Resichem 503 SPEP

### Mixing and 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***

Pour approximately half of the contents of the Activator unit into the Base container and mix carefully using a spatula. Once the two materials have been blended, add the remainder of the Activator ensuring that as much material is drained from the Activator container as possible. Mix the two components together until they are streak-free. The material, once fully mixed, has an application of time of 20-25 minutes at 20°C (68°F). This time will be extended at lower temperatures and shortened at higher ones.

Apply the mixed material onto the prepared surface by brush or roller. This should be in two coats at a target thickness of 500 (20mil) microns per coat. Apply the second coat as soon as possible after the first coat is dry and **not in excess of 6 hours**. Where the maximum over-coating interval is exceeded, the first coat should be sweep blasted and cleaned prior to over-coating.

Where small volume mixes are required, the mixing ratio is 4:1 by weight or 3:1 by volume.

## Coverage Rates

4ltrs (1.25 US gallons) of fully mixed product will give the following coverage rates –

8m<sup>2</sup> at 500 microns                      86ft<sup>2</sup> at 20mil

16ltrs (4.2 US gallon) of fully mixed product will give the following coverage rates –

32m<sup>2</sup> at 500 microns                      344ft<sup>2</sup> at 20mil

*Please note that the coverage rates quoted are theoretical and do not take into consideration the profile or condition of the surface being repaired.*

## Cure Times

At 20°C (68°F) 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	20-25 minutes
Movement without load or immersion	6 hours
Light loading	12 hours
Full loading/water immersion	4 days
Chemical Contact	7 days

## For Optimum Performance

After an initial curing period of at least 12 hours at 20°C (68°F), raising the cure temperature progressively to 60 - 80°C (140-175°F) for up to 8 hours will result in improved mechanical, thermal and chemical resistance properties

## Pack Sizes

This product is available in the following pack sizes –

4ltrs (1.25 US gallon), 16ltrs (4.2 US gallons)

## Colour

Mixed material –Dark Grey or Red

Base component –Dark Grey or Red

Activator component – Amber

## Over-coating times

Minimum - the applied material can be over-coated as soon as it is touch dry.

Maximum - the over-coating time should not exceed 6 hours.

Where the maximum over-coating time is exceeded, the material should be allowed to harden before being abraded or flash blasted to remove surface contamination.

## Storage Life

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

## Technical Data and Performance

Hardness Shore D ASTM D2240	85
Compressive Strength ASTM D695	984kg/cm <sup>2</sup> (13,950 psi)
Flexural Strength ASTM D790	871 kg/cm <sup>2</sup> (12,300 psi)
Tensile Shear Adhesion(mild steel) ASTM D1002	208 kg/cm <sup>2</sup> (2950 psi)
Corrosion Resistance (ASTM B117)	5000 hours

Please see Resichem 511 UCEN Specification Sheet for further technical and performance data.

### Health and 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. Resimac accepts no liability arising out of the use of this information or the product described herein.