RESICHEM 511 UCEN – chemical resistant coating

Resichem 511 UCEN is a high build solvent-free epoxy novolac 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.

- Solvent free epoxy novolac coating
- Hand or spray applied
- Resistant to 98% sulphuric acid & 36% hydrochloric acid in immersion conditions

Typical applications

Chemical containment	tank lining	process vessels
Chemical drains and channels	Internal pipe surfaces	sumps

Surface Preparation

Metallic Substrates

1. All oil and grease must be removed from the surface using an appropriate cleaner such as MEK.
2. All surfaces must be abrasive blasted to ***ISO 8501/4 Standard SA2.5 (SSPC SP10/ NACE 2)*** minimum blast profile of 75 microns (3mil) using an angular abrasive.
3. Once blast cleaned, the surface must be degreased and cleaned using MEK or similar type material.
4. All surfaces must be coated before gingering or oxidation occurs.

PLEASE NOTE: For salt contaminated surfaces the substrate must be pressure washed with clean water and checked for salt contamination, please refer to the surface preparation and pre-application guide for further information.

Existing Concrete

1. If the concrete surface is contaminated, pressure wash using clean water.
2. Once the concrete is dry, lightly abrasive blast or scarify taking care not to expose the aggregate.
3. Clean all dust and debris from the surface and prime with Resichem 503 SPEP (low viscosity epoxy primer).
4. Apply 503 SPEP at 150 microns (6mil) WFT, leave to cure for 3 hours (20°C/ 68°F) before overcoating.

New Concrete

1. Allow new concrete to cure for a minimum of 21 days and treat to remove any surface laitance.
2. Check the moisture content of the concrete prior to coating (8% moisture content or below).
3. Lightly scarify the surface taking care not to expose the aggregate.
4. Clean all dust and debris from the surface and prime with Resichem 503 SPEP (low viscosity epoxy primer).
5. Apply 503 SPEP at 150 microns (6mil) WFT, leave to cure for 3 hours (20°C/ 68°F) before overcoating.

Mixing

Prior to mixing please ensure the following:

1. The base component is at a temperature between 15-25°C (60-77F°).
2. The ambient & surface temperature is above 10°C (50F°).
3. The ambient & surface temperatures are not less than 3°C (6°F) above the dew point.

Once these 3 checks have been met, please proceed with mixing the product.

1. Transfer the contents of the Activator unit into the Base container.
2. Using an electric paddle mixer, mix the 2 components until a uniform material free of any streaks is achieved.
3. From the commencement of mixing the whole of the material should be used within 25 minutes at 20°C (68°F).

Application

Brush or roller applications

1. Pour the mixed material into a paint kettle or paint tray (this will maximise the usable life)
2. Using a 50mm (2”) wide synthetic brush, stripe coat all edges, joints, corners and equipment with the mixed material. The stripe coat must be approximately 100mm (4”) wide, at 300-400 microns (12-16mil) wet film thickness.
3. Once the stripe coat has cured sufficiently and is capable of being overcoated, apply the 1st coat of mixed product to all surfaces at 400-500 microns (16-20mil) wet film thickness.
4. Once the 1st coat of material has cured sufficiently, approximately 4 hours at 20°C (68F°), apply a 2nd coat of material to all surfaces at 400-500 microns (16-20mil) wet film thickness

Spray Applications

1. Spray application should be carried out by airless spray using a 45:1 ratio pump with an attached hot water pump to heat the spray lines.
2. The temperature around the spray lines should be kept around 25-35°C (77-95F°).

3. Spray pressure of 3600psi and a tip size of 19-23 thou should be used.
4. Use as short a line as possible to maintain product temperature (maximum 8meters/ 26foot)
5. Circulate the product for a short time to achieve temperature equilibrium.
6. Using a 50mm (2") wide synthetic brush, stripe coat all edges, joints, corners and equipment with the mixed material. The stripe coat must be approximately 100mm (4") wide, at 300-400 microns (12-16mil) wet film thickness.
7. Once the stripe coat has cured sufficiently and is capable of being overcoated, apply the 1st coat of mixed product to all surfaces at 400-500 microns (16-20mil) wet film thickness.
8. Once the 1st coat of material has cured sufficiently, approximately 4 hours at 20°C (68F°), apply a 2nd coat of material to all surfaces at 400-500 microns (16-20mil) wet film thickness

Coverage Rates

4ltrs (1.1 US gallon) of fully mixed product will give the following coverage rates –

10m² at 400 microns	107ft² at 16mil
8m² at 500 microns	85ft² at 20mil

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

37.5m² at 400 microns	402ft² at 16mil
32m² at 500 microns	343ft² 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	25 minutes
Minimum overcoating time	4 hours
Maximum overcoating time	12 hours
Water/ sea water immersion	4 days
Chemical immersion	7 days

For Optimum Performance

After an initial curing period of at least 12 hours at 20°C (68F°), raising the cure temperature progressively to 60 - 80°C (140-175F°) 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 (1.1 US gallon), 16ltrs (4.2 US Gallons).

Colour

Base component – Dark Grey or Red
Activator component – Amber

Over-coating times

Minimum - the material can be over-coated as soon as it is touch dry, approximately 4 hours at 20°C (68°F).
Maximum - the over-coating time should not exceed 12 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/ 60-86F°)

Other Technical Documents

Quick Application Guide	-	Brush, roller & spray applications
Safety Data Sheets	-	Base & Activator components
Product Specification Sheet	-	Technical Performance Information

Health and Safety

Please ensure good practice is observed at all times. Protective gloves, goggles & a disposable coverall must be worn during the mixing and application of this product. Before mixing and applying the material ensure you have read the fully detailed Safety Data Sheet.

Legal Notice: