

## RESICHEM 512 UCEN90

**Resichem 512 UCEN90** is a high build solvent-free high functionality epoxy novolac coating designed to provide outstanding chemical and corrosion protection of steel and concrete structures at elevated temperatures.

### Typical applications

Chimneys, chemical containment and bund areas, tanks, pumps, chemical drains and channels and pipework .

### 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.

#### 2. Concrete

Remove any contamination and lightly abrasive blast or scarify taking care not to expose the aggregate before application of Resichem 512 UCEN90 . 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 509 EPXF.

### Mixing and Application

***Warm the Base to 15-25°C before mixing and do not apply when the ambient or substrate temperature is less than 12°C or when the relative humidity is greater than 90%.***

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 30 minutes at 20°C. 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 250 microns per coat using a practical coverage rate of 3.5 sq metres per litre per coat. On rough concrete surfaces the coverage rate of the first layer in particular will be significantly reduced. 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 4:1 by volume or 5.34:1 by weight.

For spray application, in order to achieve atomisation when spraying, heat should be applied to both Base and Activator components as follows:

Base: 50-60°C                      Activator : 35-40°C  
Trace heating on lines should be maintained at 45-50°C

Dependent on the pump ratio, adjust the compressed air pressure to give a tip pressure of 4200psi at the tip.  
Spray using a 21-23 thou tip.

Spray apply the material in sufficient passes to achieve a minimum thickness of 500 microns checking the film thickness regularly with a wet film thickness gauge and brushing out the test marks. As a guide, 1litre of material should be sufficient to cover 1.6 sq metres allowing for wastage.

Once the coating has hardened, carry out a full visual inspection to confirm freedom from pinholes and misses and as a further aid to confirm continuity of the coating if on steel, carry out inspection by wet sponge test using detergent as a wetting agent.

Where the need for remedial work on isolated defects is found necessary, the surface should be abraded or lightly flash blasted prior to cleaning, masking off within the prepared area and coated by brush at approximately 250 microns thickness.

## 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	30 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

Resichem 512 has been formulated to optimise resistance to mineral acids up to 90°C immersion temperature. Exposure to mineral acids will result in the formation of a black protective lacquer. In addition, after an initial curing period of at least 12 hours at 20°C, raising the cure temperature progressively to 60 - 80°C for up to 8 hours will result in improved mechanical, thermal and chemical resistance properties.

## Technical Data and Performance

Hardness Shore D ASTM D2240	86
Compressive Strength ASTM D695	592kg/cm <sup>2</sup> (8400 psi)
Flexural Strength ASTM D790	480 kg/cm <sup>2</sup> (6800 psi)
Tensile Shear Adhesion(mild steel) ASTM D1002	188 kg/cm <sup>2</sup> (2650 psi)
Corrosion Resistance (ASTM B117)	>1000 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.

## 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

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