

RESICHEM 512 UCEN 90 XL

Resichem 512 UCEN 90 XL is an extended pot life solvent-free high functionality epoxy novolac coating designed for application in hot climates and 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.

Characteristics

Appearance

Base: Red/Grey Paste
 Activator: Amber liquid
 Mixed: Red/Grey thixotropic liquid

Mixing Ratio

By weight: 4.35:1
 By volume: 3.25:1

Density

Base: 1.41
 Activator: 1.05
 Mixed: 1.33

Solids content

100%

Sag Resistance

Nil at 1000 microns

Useable Life

12°C 50 minutes
 20°C 30 minutes
 30°C 15 minutes

Coverage

Apply the mixed material onto the prepared surface by brush or roller. This should be in two coats at a target thickness of 300-400 microns per coat using a practical coverage rate of 2.5 sq metres per litre per coat. On rough concrete surfaces the coverage rate of the first layer in particular will be significantly reduced.

For spray application use 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, 1 litre of material should be sufficient to cover 1.6 sq metres allowing for wastage.

Cure Times

At 30°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:

Movement without load or immersion	6 hours
Light loading	12 hours

Full loading/water immersion	4 days
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Chemical Contact	7 days
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NOTE: After an initial curing period of at least 12 hours at 30°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.

Storage life

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

Mechanical Properties

Adhesion

Tensile Shear to ASTM D1002 on abrasive blasted mild steel with 75 micron profile

201 kg/cm² (2855 psi)

Compressive strength

Tested to ASTM D 695
 901kg/cm² (12,800 psi)

Corrosion Resistance

Tested to ASTM B117

> 1000 hours

Flexural Strength

Tested to ASTM D790
 810 kg/cm² (11,500 psi)

Hardness

Shore D to ASTM D2240
 20°C 86
 100°C 85

Heat Distortion

Tested to ASTM D648 at 264psi fibre stress.
 20°C Cure 60°C
 100°C Cure 98°C
 150°C Cure 122°C

Heat Resistance

When post-cured suitable for use

in immersed conditions in mineral acids at temperatures up to 90°C, hydrocarbons up to 105°C and dry conditions up to 200°C dependent on service.

Chemical Resistance

Resichem 512 UCEN 90 XL when post-cured offers excellent resistance to the following chemicals when tested at the temperatures indicated:

98% Sulphuric Acid	75°C
75% Sulphuric Acid	90°C
50% Sulphuric Acid	90°C
25% Sulphuric Acid	90°C
36% Hydrochloric Acid	50°C
10% Hydrochloric Acid	50°C
40% Phosphoric Acid	60°C
20% Phosphoric Acid	60°C
5% Nitric Acid	50°C
40% Sodium hydroxide	90°C
20% Sodium Chloride	90°C

In addition the product offers excellent resistance to the following chemicals when tested at 20°C:

Ammonium hydroxide	30%
Butanol	100%
Benzene	100%
Cyclohexane	100%
Diethanolamine	100%
Ethanol	100%
Ethylene glycol	100%
Hexane	100%
Hexanol	100%
Methyl diethanolamine	100%
Propylene glycol	100%
Octane	100%
Xylene	100%

under the scope of the company's fully documented quality system.

Warranty

Resimac warrants that the performance of the product supplied will conform to the typical descriptions quoted within this specification provided material is stored correctly and used according to the procedures detailed in the Technical Data Sheet for the material.

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 Product Specification 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.

Quality

All Resimac Products are supplied

Health and safety

Please ensure good practice is observed at all times during the

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