

RESICHEM 501 CRSG

Resichem 501 CRSG is a high build solvent-free epoxy coating designed for the long term protection of steel and concrete structures against corrosion, abrasion and chemical attack. Operating temperature ranges from -20°C to 60°C (140°F). The two component product is highly resistant to marine and industrial environments, buried conditions, ground water, effluents, salt water and a wide range of oils and chemicals.

Typical applications

Pipelines	tank internals	chemical containment	bund areas
sheet and bearing piles	Sumps	chemical intake areas	chemical pits
structural steel			

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 501 CRSG . 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

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 20-25 minutes at 20°C (68°F). For small volume mixes, the mixing ratio is 2.4:1 by volume.

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 (10mil) per coat using a practical coverage rate of 3.5 sq metres per litre per coat (37sq ft per 0.25 US gallon). Apply the second coat as soon as possible after the first coat is dry and not in excess of 36hours. Where the maximum over-coating interval is exceeded, the first coat should be sweep blasted and cleaned prior to over-coating.

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Where spray application is required, this should be carried out by airless spray using a 60:1 ratio pump with an input pressure of 60psi and a tip size of 0.025-0.03inches. Warm the base to up to 40°C and ensure that the mixed material is at a temperature of 28-36°C. Use as short a line as possible to maintain product temperature circulating the product for a short time to achieve temperature equilibrium. The practical coverage rate for spraying is 1.5 sq metres per litre for a 500 micron coating.

Coverage Rates

3.4ltrs (0.9 US gallon) of fully mixed product will give the following coverage rates –
13.6m² at 250 microns 145ft² at 10mil
16ltrs (4.2 US gallon) of fully mixed product will give the following coverage rates –
64m² at 250 microns 688ft² at 10mil

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	3-4 hours
Light loading	6-8 hours
Full loading/water immersion	3 days
Chemical Contact	5 days

For Optimum Performance

After an initial curing period of at least 4 hours at 20°C (68°F), raising the cure temperature progressively to 40 - 50°C (105-122°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 –
3.4ltrs (1 US gallon), 16ltrs (4 US gallons)

Colour

Mixed material – Light Grey, Dark Grey or Mid Blue
Base component – Light Grey, Dark Grey or Mid Blue
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 36 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

Tensile Shear Adhesion(mild steel) ASTM D1002	194 kg/ cm ² (2750 psi)
Hardness Shore D ASTM D2240	80
Water Resistance (British Gas CW6 and FW0028 Draft methods).	Pass at 50°C
Cathodic Disbondment (British Gas CW6 and FW0028 Draft methods).	Pass
Flexibility (FW0028 Draft method)	3% Strain at 20°C - PASS 2% Strain at 5°C - PASS 1% Strain at 0°C - PASS
Corrosion Resistance (ASTM B117)	5000 hours

Please see Resichem 501 CRSG 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.

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