Technical Data Sheet

PES-CHEM 501 CRSG

PES-CHEM 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 4°F – 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, tanks, chemical containment and bund areas, sheet and bearing piles and other land and marine structures are typical applications.

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.

For optimum results, the surface should be abrasive blasted to a NACE Standard 2 or SSPC SP10 and a minimum blast profile of 3 mil 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.

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 PES-CHEM 505 Dampseal. Where the concrete is dry but highly porous, it is recommended to condition with PES-CHEM 509 EPXF.

Mixing and Application

Warm the Base 59 – 77°F before mixing and do not apply when the ambient or substrate temperature is less than 50°F or when the relative humidity is greater than 90%.

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 60 minutes at 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 10 mils per coat using a practical coverage rate of 37.5 sq. ft. per litre per coat. Apply the second coat as soon as possible after the first coat is dry and not in excess of 36 hours. Where the maximum over-coating interval is exceeded, the first coat should be sweep blasted and cleaned prior to over-coating.

Where spray application is required, this should be carried out by airless spray using a 60:1 ratio pump with an input pressure of 60 psi and a tip size of 0.025-0.03 inches. Warm the base to up to 104°F and ensure that the mixed material is at a temperature of 82 – 97° F. 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 16 sq. ft. per litre for a 20 mil coating.

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Cure Times

At 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	60 minutes
Movement without load or immersion	6 hours
Light loading	12 hours
Full loading/water immersion	4 days
Chemical Contact	7 days

Technical Data and Performance

Tensile Shear Adhesion(mild steel) ASTM D1002	2750 psi (194 kg/ cm^2)
Hardness Shore D ASTM D2240	80
Water Resistance (British Gas CW6 and FW0028 Draft methods).	Pass at 122°F
Cathodic Disbondment (British Gas CW6 and FW0028 Draft methods).	Pass
Flexibility (FW0028 Draft method)	3% Strain at 68°F - PASS 2% Strain at 41°F - PASS 1% Strain at 32°F- PASS
Corrosion Resistance (ASTM B117)	5000 hours

Storage Life

5 years if unopened and stored in normal dry conditions (59 – 86°F)

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.

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