Technical Data Sheet

PES-CHEM 502 CRXF

PES-CHEM 502 CRXF is a fast curing 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 deg F – 140 deg 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.

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 #2 Standard or SSPC SP10 and a minimum blast profile of 3 mils 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 PES-CHEM 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 Dampseal. Where the concrete is dry but highly porous, it is recommended to condition with PES-CHEM EPXF.

Mixing and Application

Warm the Base to 59 – 77 deg F before mixing and do not apply when the ambient or substrate temperature is less than 50 deg 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 steaks is achieved. From the commencement of mixing the whole of the material should be used within 20 minutes at 68 deg 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 18 hours. 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 60 psi and a tip size of 0.025-0.03 inches. Warm the base to up to 104 deg F and ensure that the mixed material is at a temperature of 82 – 97 deg 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.

Cure Times

At 68 deg 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 minutes
Movement without load or immersion	3 hours
Light loading	6 hours
Full loading/water immersion	2 days
Chemical Contact	7 days

Technical Data and Performance

Tensile Shear Adhesion(mild steel) ASTM D1002	190 kg/ cm^2 (2700 psi)
Hardness Shore D ASTM D2240	80
Water Resistance (British Gas CW6 and FW0028 Draft methods).	Pass at 122 deg F
Cathodic Disbondment (British Gas CW6 and FW0028 Draft methods).	Pass
Flexibility (FW0028 Draft method)	3% Strain at 68 deg F - PASS 2% Strain at 41 deg F - PASS 1% Strain at 32 deg F - PASS
Corrosion Resistance (ASTM B117)	5000 hours

Storage Life

5 years if unopened and stored in normal dry conditions (59-86 deg 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.

Legal Notice

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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 products suitability for use. PES accepts no liability arising out of the use of this information or the product described herein.