



## **Application Guidelines for PPC Coatings QC Resin System – Waste Water**

### **PPC Coatings QC Resin System for the protection of old and new concrete.**

The PPC Coatings QC Resin System described below, is an alternative and equal coating system to the PPC Three Coat system, that can be applied by brush, roller, trowel and spray.

### **General Objective**

The objective of this specification is to describe the material and workmanship necessary to achieve desired results for the PPC Coatings protection system. All application procedures shall be performed in a manner satisfactory to the owner, strictly adhering to all safety regulations and manufactures instructions, including surface preparation, coating procedure, safety instructions, storage and handling of coating materials.

### **Description of Coating Material**

PPC Coatings QC Resin System is a highly modified, two component rapid curing thermoset resin, 100% solids without solvent entrapment after cure, which meets or is well below the maximum VOC emissions requirements. PPC Coatings can be applied year round, from temperatures ranging from minus 40°F to 160°F without the need for external heat, with full return to service of coated substrate within an hour of curing, with no limitation of a recoat time window. The Resin will exhibit no adhesion interfering shrinkage on curing. Coefficient of Expansion will be similar to that of concrete. Coating will provide resistance to a broad range of corrosive chemicals, high abrasion and impact. Flexural strength of up to 17,000 PSI, Compressive strength of up to 20,000 PSI, Tensile strength of up to 10,000 PSI. System will consist of a Prime Coat, that once cured will form a sealed surface, filling and sealing Bug Holes, Holidays, and Concrete Voids. QC Resin Intermediate and, or, Seal coat applied onto the Prime Coat at a total coating thickness of no less than, but not limited to, 60 mils, required for the PPC Coatings application system for coating and sealing concrete in waste water and aggressive corrosive and abrasive environments.

### **Preparation of Concrete Surface**

Proper adequate preparation of surface substrate is essential to the success of PPC Coatings. New concrete should be cured for at least 28 days. For concrete enhanced curing systems, or Pre Cast concrete that will fully hydrate and cure in less than 28 days, please consult PPC Coatings technician prior to application. Both old and new concrete substrates shall be prepared by removing any existing cement surface (concrete laitance), creating an open, coarse, porous exposed aggregate substrate, free of all loose and spalled concrete. The exposed concrete surface shall be sound, dry, and clean, free from all dirt, dust, grease, oil, release agents, dew, or any substance that will contaminate the surface and prevent direct contact of PPC Prime Coat with the concrete surface. All previous coatings, concrete sealants or hardeners must be fully removed. Required coarse surface profile shall be at least similar to that of a # 40 Grit sandpaper, profile depth of at least 1mm, reference ICR CSP 5-6. Any exposed oxidized rebar must be cleaned and sand blasted to obtain a “white metal” SSPC-5 profile. Concrete surface must be tested for Ph, and fall in a Ph range of 5 – 9 prior to coating with Prime Coat. Surface must be dry, not exceeding 5% moisture, prior to coating of PPC QC Resin Prime Coat. If required, test moisture according to ASTM D 4263 taped down plastic film test or any other approved moisture testing system. Substrate Temperatures must be above the Dew Point prior to application.



## **Application of PPC Coatings System**

### **Prime Coat**

PPC Prime Coat must be applied to all surfaces to be coated, including any voids or areas that are not flush with the surface. PPC Prime Coat is applied with PPC Coatings QC Resin. QC Resin must be mixed in its original container prior to application. PPC Resin must be measured and an activator must accordingly be added to QC Resin and thoroughly mixed together prior to application on substrate to be coated. PPC Coatings QC Resin Prime Coat can be applied by Roller, Brush, Trowel or Spray, to the required prepared course, clean and dry substrate.

Apply a generous amount of activated QC Resin onto prepared substrate. While QC Resin is still in a wet uncured resin form, asserting pressure, Back Trowel into the substrate, filling and sealing all bug holes, holidays, and concrete voids. Deep spalled areas in the concrete substrate must be Prime Coated. Any Exposed rebar must be Prime Coated. Once coating is dry, inspect the Prime Coated Surface. All dry spots or dry areas must be recoated. Once Prime Coat has cured and is dry to touch, next coat can be applied. Thickness of Prime Coat should be no less, but not limited to 7 mils. PPC Coatings QC Resin Prime Coat coverage rate will vary according to the condition of the substrate.

### **Spalled Areas and Concrete Voids**

Concrete surfaces, spalled areas and concrete voids that were not sufficiently filled and sealed with a Prime Coat that require filling, must be Primed coated as described. Areas required to be filled, can be patched, filled and sealed to create a monolithic even surface by applying a PPC Grout. PPC Grout is formed by adding and mixing a filler into an activated PPC QC Resin, creating a thixotropic grout that can be troweled to seal and patch vertical, horizontal and ceiling areas. When numerous Deep Spalls and Voids are apparent on the surface, the entire surface can be troweled and built up to create a monolithic surface at the required specified coating thickness. Thickness of PPC Grout is not limited. PPC Filler Grout can be applied in multiple coats. PPC Filler Grout must be coated and sealed with QC resin. Once PPC Grout has been applied, and is dry to touch, next coat can be applied. Horizontal floors that have deep spalled voided areas can be filled with PPC Grout, created by mixing PPC QC Resin that has been activated, together with a clean dry aggregate of any size. All areas to be patched are filled with the aggregate grout to create a monolithic surface. Entire horizontal surface can be troweled and built up with PPC grout to the required specified coating thickness. Next coat if required, can be applied once coating has cured and is dry to touch. Horizontal surfaces can as well be filled and sealed with PPC Thixotropic Grout as applied to vertical surfaces.

**Pre-Cast Joints:** Once Pre-Cast Units are in place, Section joints of Pre-Cast units are coated and sealed with PPC filler grout as described above. Joint sealer grout must be applied to an adequately prepared clean, dry and primed coated surface. If Pre-Cast sections are coated in the yard and delivered and placed on site, joint section, and at least one inch of coated surface on each side of the joint must be cleaned to create direct contact between surface and PPC Grout. When filling joints with PPC grout, overlap coating onto the cleaned coated area next to the joint, creating a sealed coated homogeneous surface. PPC Thixotropic Grout must be coated and sealed with QC Resin.



### **PPC Coatings QC Resin Intermediate and Seal Coat**

PPC Coatings QC Resin Intermediate and or Seal Coat shall be applied over cured, clean and dry Prime Coat, and grouted areas if applied. This coat shall consist of QC Resin, with or without Color Pigment. QC Resin is a unique modified and formulated resin that can be built up to the required thickness by application with a Roller, Brush, Trowel or Spray. PPC QC Resin must be activated prior to application on substrate. PPC QC Resin can be applied at a thickness to meet the specified coating system thickness. PPC QC Resin can be applied in consecutive coats. If Required, next coat can be applied once the undercoat has cured and is dry to touch. Approximate coverage rate of a 60 mil PPC QC Resin application system is 26 sq/ft. per gallon.

### **General Application**

- \* PPC Coatings may only be applied by factory trained and approved skilled applicators.
- \* Comply and follow all safety and application regulations and requirements in accordance with Local, State, Federal, OSHA, NIOSH, MSHA, or any other applicable safety administration, prior to, and during PPC application procedure.
- \* PPC Coatings Safety Data Sheet must be read and understood prior to opening of PPC Coatings containers and application. SDS for all chemicals, to include PPC Coatings Resins shall be available on site.
- \* Sufficient ventilation is required when applying PPC Coatings. Protective equipment, clothing and respiratory requirements must be followed in accordance with the PPC Coatings SDS, as well as with the requirements and regulations of all safety and regulatory entities as stated above.
- \* PPC Coating Resins are supplied in 5 Gallon Pails. Custom packaging available upon request.
- \* All materials will be brought to the job site in the original manufacturer's containers and shall be subject to inspection by the engineer.
- \* PPC Coatings must be stored in a cool shaded dry area, out of direct sunlight, in sealed containers.
- \* Activator must be added to PPC Coatings QC Resin Prior to Application.
- \* The applicator shall mix, and activate the material and apply each coat at the rate and in the manner specified by the manufacturer.
- \* Allow each coat to dry to touch before the next coat is applied. Coating must be dry and clean prior to recoat.
- \* DOT regulation classification for PPC Coatings Resin – UN 1866 Resin Solution ; Flammable 3 ; PG 3 ; Class 55

#### **PPC Coatings - Modified Thermoset Resins Inc (MTR)**

**2 Pixie Road, Wilmington, DE 19810, USA ,**

**302-235.3710 , Fax:302-444.8059 [www.ppccoatings.com](http://www.ppccoatings.com) / emai: [ppc@ppccoatings.com](mailto:ppc@ppccoatings.com)**

DISCLAIMER OF WARRANTIES: Although buyer is purchasing this product "AS IS" and "WITH ALL FAULTS", products which are defective in workmanship or material and which are not more than 90 days old from date of purchase, will be repaired or replaced at no charge to the buyer, upon proper proof of purchase, PPC Coatings (MTR Inc) obligation hereunder shall be limited solely to repair and replacement of goods that fall within the foregoing limitations, and shall be conditioned upon PPC's receipt of written notice of any alleged defect or deficiency promptly after its discovery. PPC MAKES NO WARRANTY AS TO FITNESS OF ITS PRODUCT FOR SPECIFIC APPLICATIONS BY THE BUYER THEREOF, NOT AS TO PERIOD OF SERVICE unless PPC specifically otherwise agrees in writing after the proposed usage has been made known to it. Under no circumstances shall PPC be liable for any consequential or incidental damages related to personal injury or wrongful death on product. This product is manufactured of selected raw materials by skilled technicians. Neither seller nor manufacturer has any knowledge or control concerning the purchaser's use of this product and no warranty is made as to the results or any use. THE FOREGOING LIMITATION OF DAMAGES AND WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, BUYER ACKNOWLEDGES THAT ALL CLAIMS FOR DAMAGES AND WARRANTIES IMPLIED BY THE COMMON LAW OR UNIFORM COMMERCIAL CODE ARE EXPRESSLY EXCLUDE FROM THIS SALE. THERE IS NO WARRANTY AS TO THE ADEQUACY OF WARNING CONCERNING THE HANDLING OR USE OF SUCH PRODUCT OR ANY OTHER MATTER RELATING TO IT, AND ALL WARRANTIES EXPRESSED OR IMPLIED, ARE EXCLUDED FOR INDUSTRIAL USE ONLY. Technical and application information provided herein for the purpose of establishing a general profile of the coating, and proper coating application procedures. Test performance results were obtained in a controlled environment and PPC makes non claim that these tests or any other tests accurately represent all environments. As application, environment and designs factors can vary significantly, due care should be exercised in the selection and use of the coating. PPC disclaims responsibility for results of use of this information. It is furnished without warranty, representation, inducement or license of any kind. It is accurate to the best of PPC's knowledge or obtained from sources believed by PPC To be accurate, and PPC Does not assume any legal responsibility for use or reliance upon same. Customers should conduct their own tests, as it is user's responsibility to be guided by such tests in determining suitability of any such product, method or apparatus for his purpose.