SureCoat 1007
CONCRETE SEALER

SureCoat Systems Concrete Sealers are being successfully used by contractors throughout the United States and Canada. Two projects, the Corpus Christi Texas Seawall Reconstruction Project and recently the salvaging of a 46,000 sq ft very porous concrete slab at the PPG Plant in Sulphur, Louisiana, are briefly described to illustrate how SureCoat 1007 is used.

SureCoat's product line is unique in that the hydrophilic properties of our products seal cracks, capillaries, honey combs, and joints in the concrete in order to prolong the useful life of the concrete through quality repair, restoration, waterproofing and protection. SureCoat products are non-toxic, water based, and environmentally safe.

SureCoat sealers are formulated clear sealers that have a penetrating inorganic potassium-sodium modified material that "fuses" with the concrete to stop water, oil, gas, grease, salts and other fluids from damaging the concrete yet still allow the concrete to breathe. Our sealers react with the alkali in the concrete to form a penetrating micro-solution which hardens and consequently densifies the concrete. SureCoat 1007 and 1007-S sealers penetrate 2" to 4" into the substrate of the concrete (depending upon the concrete composition), harden and become an integral part of the concrete resulting in a much denser and stronger concrete. The sealer also "coats" the rebar in the concrete to prevent deterioration from moisture and contaminants.

SureCoat also offers technical support and hands-on-knowledge and expertise in all phases of moisture vapor emission control, exterior concrete/masonry cleaning and restoration, waterproofing and sealing concrete/masonry coatings including 8-10 second fast-set-tack-free coatings which can be hot or cold applied.

PENETRATION OF SURECOAT 1007 TEST

June 19, 2006: Mixed a fluorescent dye (compatible with the size of the SureCoat 1007 molecules) into SureCoat 1007 and applied the solution to a piece of 4" thick concrete.

June 21, 2006: Sheared the concrete test pattern piece to view penetration of SureCoat 1007. Using an ultraviolet forensic black light to highlight the fluorescent dye, we viewed penetration of SureCoat 1007 as deep as approximately 1" to 2 ½" into the concrete substrate.

June 23, 2006: Sheared another piece off the concrete test block. Using the ultraviolet forensic black light to highlight the fluorescent dye, we viewed penetration of SureCoat 1007 had, over the time lapse since application, penetrated to approximately 2 ½" to 3 ½" into the substrate of the concrete.

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NOTE: Dense areas of the concrete test block did not show penetration as deep as did the portions of the concrete test block that were more porous.

CORPUS CHRISTI TEXAS SEAWALL RECONSTRUCTION PROJECT

SureCoat 1007 was specified with no alternate being acceptable in the Reconstruction of the Corpus Christi Texas Seawall Project. Over a 5-year period, a new sheet pile watercap was installed on the entire length. A hot (160°F) applied plural component watercap was submerged in the salt water bay with only about 6" to 22", depending upon the tide, above the water line. The concrete watercap constantly had a moisture content of 100%.

In order to get proper adhesion of the polyurea and without pin-holing, the moisture content of the concrete watercap had to be lowered to acceptable rates. SureCoat's 1007 was the only sealer able to do this. After proper surface prep, SureCoat 1007 was applied to the concrete. Within 72 hours, SureCoat 1007 locked the moisture in the concrete leaving the surface moisture content at an acceptable level to accept the hot-applied plural component polyurea without pin-holing.

PPG PLANT
(Sulphur, Louisiana)

In March 2007, SureCoat 1007 Sealer was applied to approximately 46,000 sq ft of concrete at PPG Plant in Sulphur, Louisiana. SureCoat was called because the concrete was so porous that it seemed the only solution was to demolish and re-pour the entire slab. A person could, by scratching with very little effort with a screwdriver, penetrate approximately 1/8" into the concrete. On March 2, pull adhesion tests performed on the porous concrete read between 185 psi to 250 psi.

SureCoat 1007 Sealer was applied to refusal to the porous concrete. After 24 hours, adhesion pull tests were once again performed in the same general areas. The readings were now 400 psi to 535 psi. A hot applied plural component polyurea coating was then applied.

One week later adhesion pull tests were once again done with the readings of 900 psi to 1200 psi. Some of the pull tests indicated more than 1600 psi when the adhesion dials broke loose from the polyurea coating. Polyurea, a highly chemical resistant coating, is a difficult coating for adhesion of pull test dials.