

## **APPLICATION PROCEDURE FOR SURECOAT DEEP PENETRATING DENSIFIERS AND SEALERS**

### **SS1007-C-Catalyst/DPD-SS1007/DPD-SSL1007/WR-SS5000 or STAIN REPELLENT**

#### **Densifier & Water Repellent Sealer to Restore Degraded Cinder Block, Masonry & Concrete Floors, Walls or Decks.**

A test pattern should always be conducted on an area of the surface that is to be cleaned and sealed. Adjustments should be made according to results of test pattern. An example of a test pattern for degraded Cinder Block is below.

#### **Test Pattern and Application over cinderblock walls and concrete walls, floors and decks:**

1. Perform a test pattern in at least a 4' x 4' square area first to determine what materials it will take to properly treat the entire area.
2. Clean walls or floor with HD concrete cleaner or SureSkrub depending on the amount and type of dirt on the block. If heavy effloresces has hardened and is blocking the surface then it needs to be removed. SureCoat's Efflorescence Remover is recommended. If heavy oils or other solids are blocking the surface then sand blasting might be needed to open the surface so that the products can penetrate into the masonry or concrete.
3. Check the pH of the masonry or concrete. If it is less than pH10 then use the SS1007C (catalyst) first.
4. If the catalyst is needed apply 1 gal of SS1007C per 50SF. If not go to step #6.
5. Mist the surface with water and let it sit for 14-16 hours-mist means a very light coat of 1 gal per 300SF
6. Apply DPD-SS1007 at 1 gal per 50SF in a wet on wet application approximately 3-4 passes. Let it sit 30-40 minutes and repeat
7. Apply DPD-SS1007 at 1 gal per 50 SF in a wet on wet application approximately 3-4 passes. Let it sit 20-30 minutes and repeat. If it locks up then apply a light coat of water and the SS1007C at 200SF per gallon.
8. Apply 2 more applications of the DPD-SS1007.
9. After final coat of DPD-SS1007 mist with a light coat of SS1007C, if the catalyst was needed. If no catalyst was used then mist with water at approximately 300 sq. ft. per gallon to the surface. Wait 30-40 minutes.
10. Apply a light coat of potable water and let it sit for 7-10 days.
11. Rinse all the purge salts and check with moisture meter. In some cases there may not be any salts to purge. It will depend on the age and condition of the existing concrete.
12. If the moisture level is acceptable then apply either membrane forming coating systems according to instructions or WR-SS5000 at a rate of 200SF per gallon with a wet on wet application. Stain Repellent can be substituted for WR-SS5000 if a more durable product is needed such as in oil & gasoline refineries or parking structures.
13. If the moisture content is still too high apply SS1007C and mist with water and apply more DPD-SS1007 and repeat steps 9 and 10.
14. The result of these steps will determine what the application will need to be on the entire project. The amount of product used in the test pattern area will help determine the amount of product that will need to be purchased to properly restore your cinder block wall/floor project.

#### **CLEANING: If the concrete has been in service and is extremely dirty with grease and oil start at #1 if normal dirt start at #4**

1. Sandblast to remove oily residue and to open the capillaries of the concrete
2. After sandblasting, if noticeable oily residue is still present, clean surface with HD Concrete Cleaner. Allow it to sit for at least 5 to 10 minutes on the stained and greasy areas. Then scrub areas with deck broom and power wash away all soap residues with high pressure water. Use 3000 psi or more with 4-5 gals per min. Continue to power wash until no soap residue is present.
3. Repeat step 2 if necessary for heavy stains and grease areas. No soap residue must remain on concrete.
4. After all greasy and stained areas have been removed; apply and use SureCoat HD Concrete Cleaner according to Product Data Sheet application procedure to the entire concrete area.
5. Concrete must be cleaned of all dirt, grease, stains, & soap residue before application of SureCoat Densifiers & Sealers.
6. Apply SureCoat Densifiers and Sealer according to instructions. The cleaned concrete can be slightly damp to dry.

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**Additional Notes-Please read before starting:**

1. Using a Hudson Sprayer multiple applications (3-4) of SureCoat DPD-SS1007 or DPD-SSL1007 should be applied approximately 30-40 minutes apart. Each application must be applied so that a light wet sheen appears on the concrete for 3-5 minutes each time. Avoid allowing the SureCoat Sealers to puddle by sweeping sealer to dryer areas.
2. **CAUTION:** Ponding DPD-SS1007 or DPD-SSL1007 will leave white glazed spots on the concrete if the pond is allowed to dry.
3. **DO NOT** use catalyst if pH is 10 or higher or if concrete needs to be purged of oil, salts and loose calcium and lime. Purging takes 24 to 48 hours. Do not apply 48-72 before or after freezing temperatures.
4. Concrete that is 20-25 year old that is soft may need a catalyst. A pH Test will determine if the catalyst is necessary. If it needs one and it is not applied the DPD-SS1007 will not react and the chemical reaction will not take place.
5. Water must be applied at the end because there is no calcium hydroxide in the top 1/16" to 1/8" of the concrete. The potable water carries the uncured potassium (or lithium crystals if DPD-SSL1007 used) crystals into the concrete and locks them in. The application of potable water also leaves the top of the concrete open to accept applications of concrete stains, primers or other coatings.
6. If no other membrane forming or penetrating coating is to be used then WR-SS5000 or Stain Repellent should be applied at a rate of 1 gallon per 50-200 sq. ft. to seal the concrete. WR-SS5000 and Stain Repellent are penetrating water and stain repellent that sits below the profile of the concrete. They are not a membrane forming material. They can be used and perform as anti-graffiti coatings also.
5. **Reminder:** SureCoat DPD-SS1007/DPD-SSL1007 sealer must be allowed to cure for 7-10 days (varies according to temperature, humidity, and density of concrete) before any other type of surface membrane forming material, Stain Repellent or WR-SS5000 is applied.
6. The DPD-SS1007 materials seal the matrix and capillaries of the concrete 2"-4" deep starting 1/16" below the profile. The top 1/16"-1/8" is purposely left available and open to receive other coatings. The WR-SS5000 or Stain Repellent will fill in that area which will cause moisture and other liquids to remain on the surface of the concrete and prevent them from soaking into the concrete. This is why it will also act as an anti-graffiti coating.
7. Do not use WR-SS5000 or Stain Repellent when using membrane forming coatings as the final application. Membrane forming coatings need an area below the profile to attach for adhesion; filling them could cause delamination issues at a later time.
8. Using DPD-SS1007 on concrete floors before applying epoxy (poly urea etc.) floor coatings will prevent hydrostatic pressure from lifting the floor coatings. This is the typical standard treatment before epoxy floor coatings are applied to prevent failures due to hydro static pressure.

**Application Instructions for SureCoat SS-5000 Penetrating Water Repellent:**

1. If the concrete has been put back into service, then clean the concrete once again of accumulated contaminants repeating cleaning steps 4 and 5 above. Oil, grease and other accumulated stains must be removed and the concrete pressure-washed clean of all soap residue.
2. Apply WR-SS5000 (according to directions on product data sheet) at a rate of 1 gallon per 50-200 sq. ft. In most cases if the DPD-SS1007 has been used the application rate of the WR-SS5000 or Stain Repellent will be approximately 150-200SF per gallon.
3. As soon as concrete is dry it may be put back in service.
4. For technical assistance, call 877-823-7873.

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**SS-1007- Penetrating Densifier/Hardener/Water Vapor Barrier**

The concrete is about 40 yrs. old and very porous. Over the years the pressure inside has caused the aging concrete to crack and leak. There are several of these throughout the plant with water in them. The customer thought the only way to fix them would be to empty them and then coat the inside with a membrane forming coating. This would be mean down time and loss of revenue. The Solution to that was to water proof and repair them in place from the outside walls. Cleaning the thick accumulation of salts, efflorescence, around the crack was cleaned with the Efflorescence Cleaner. The Heavy Duty Concrete Cleaner was used to remove the embedded dirt. This made it possible for the SS1007 to penetrate 2"-4" deep to purge out the water, contaminants and salts, and fill the matrix inside the concrete with a liquid silica that hardens to densify the concrete. This is the point where the concrete and rebar is dried out, the voids filled in and the strength has been restored internally. The moisture vapor is blocked but still allowing it to breath.



**SS-5000-Penetrating Water Repellent or StrucSureCoat-Waterproof Membrane Coating**

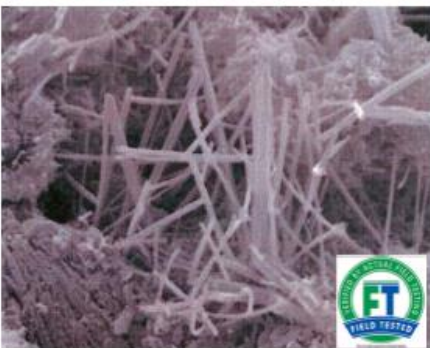
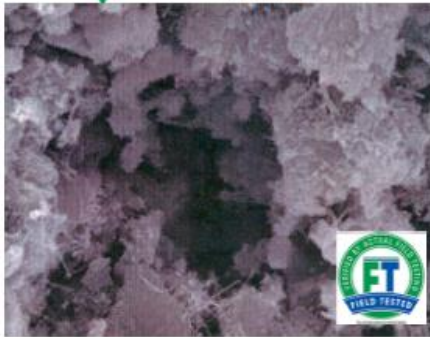
The SS5000 application is the final step to create a water repellent exterior. It will fill the last 1/8"-1/16" below the profile of the concrete to seal it completely. Water should bead up on the surface when it is completed. If they were going to paint the outside the SS5000 would not be applied, instead StrucSureCoat would be applied to prevent any wind driven rain from penetrating the walls. The SS5000 is non membrane forming and sits below the surface. For that reason it doesn't wear off. StrucSureCoat is membrane forming and would be used instead of paint. In cases where there is on going moisture on the inside, hydrostatic pressure, it is better to treat it with SS5000 and not add a membrane to the exterior. If this was a wall without water behind it then the StrucSureCoat would be an option to make it look nice on the outside.



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The Internal densification process takes place during the 1<sup>st</sup> to 10<sup>th</sup> day. This is the reaction that takes place internally changing the DPD-SS1007 from a liquid to gel state. It takes approximately 7-10 days to get to a gel state. Then from a gel to a solid takes approximately another 18 days (total 28 days) for maximum strength to be achieved. Like curing concrete it could continue longer this is to get a visual of the process. The WR-SS5000 (Water Repellent) should not be applied until after the 7-10 day process is complete and the surface has been cleaned. The salts and contaminants will be present on the surface and need to be cleaned off before the WR-SS5000 is applied.



7-10 Days Gel stage forming strands reinforcing in the matrix, purging out moisture, contaminants, drying out rebar, making concrete stronger when this strands harden

*SureCoat SS1007* is a hardening densifier, water remediation, vapor moisture barrier that purges out contaminants and salts that cause concrete to breakdown and deteriorate. Many times the sand used to make concrete has high levels of salts and chlorines that cause it to break down when it gets wet. Treating concrete before applying a coating will prevent it from lifting or blistering whether it is on a roof, wall or floor. Basement walls can be waterproofed from the inside walls. Old concrete on parking structures, concrete roofs, historical buildings, mortar joints, and chemical damaged floors as well as much more can be restored. SS1007 penetrates 2"-4" deep. Other hardeners will go ½" to maybe 1" deep and cannot reach the moisture or contaminants to achieve the structural integrity that SureCoat SS1007 can. SS1007 is in a class all its own!!



28 days complete process done filled in the matrix where moisture vapor could infiltrate but leaves space for air for breathing. Increased structural integrity.

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**PURGED CONTAMINATES APPEARING ON  
SURFACE DURING DRYING PROCESS OF SS1007  
(Contaminates to be pressure washed away)**



**SureCoat Systems Heavy  
Duty Concrete Cleaner  
using 1 gallon in 100  
square feet area**

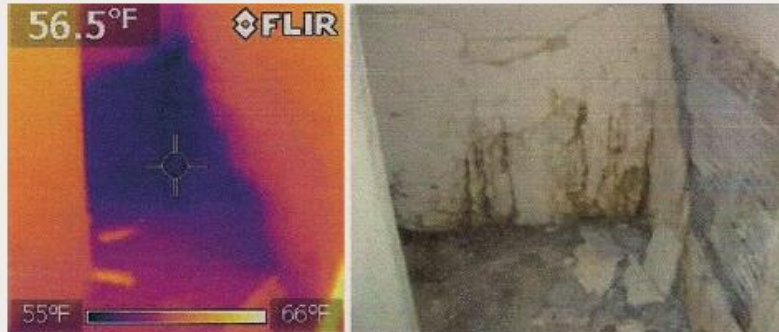
SS HD Concrete Cleaner lifts out ground in dirt and contaminates. To keep clean and prevent dirt from absorbing into the concrete again use SS5000. If it is weakened or porous concrete SS1007 can be used before the water & stain repellent SS5000



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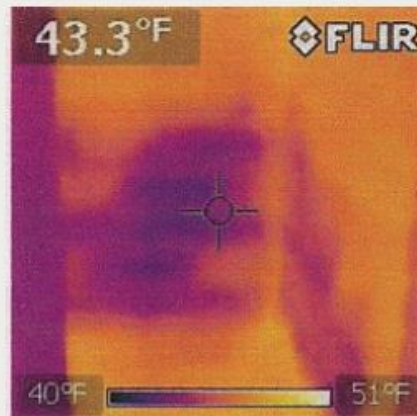
**EXAMPLE OF BASEMENT LEAK IDENTIFICATION AND REPAIR**



The infrared image on the left, of the basement wall before the plaster was removed, helped us identify where the leak was and, just as importantly, where it was not. That kept us from having to take the plaster and other coatings off of the walls throughout the entire basement just to try to find the leak.

After we identified the leak area with the infrared camera, we started taking the loose plaster and other coatings off of just in that spot. SureCoat Systems' SS1007 Penetrating Sealer was applied to the large cracks and openings in the foundation wall and basement floor in that area.

SureCoat Systems' SS1007 Penetrating internal sealer was applied to the entirety of the basement wall and floor area to help keep the entire basement dry and clean in the future. The SureCoat Systems' waterproofing products use can be put on over most coatings that are still intact and, after the SureCoat Systems' products dry and set up in the walls, most types of membrane forming coatings and other SureCoat finishes can be applied to the surface of the concrete or masonry walls with no bonding problems. The SureCoat Systems' clear waterproofing products do not change the surface profile of the concrete or masonry they are applied to. The SureCoat Systems' products are truly revolutionary for use in many settings due to their unique properties.



This infrared image was taken within a couple of hours of the SureCoat Systems' SS1007 being applied to the leaky basement wall area, and the difference in the moisture content in the walls is already clearly reduced. As the product continued to set up in the wall over the next few days, the wall became more and more dry and resistant to any new moisture coming through the walls from the outside.

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