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TRAINING GUIDE

for SCP Treatments

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Few things keep Spray-Lock Concrete Protection's (SCP) technology from meeting or exceeding expectations. The few things that could be all within the control of the applicator. This is why Spray-Lock focuses on proper training and support of the applicator, and by requiring site testing and documentation. These Standard Operating Procedures (SOPs) help applicators remember, prioritize, and coordinate all that needs to be done at the job site and understand why it's necessary.

Recommended Equipment for Applications

Typical spray system

Vertical or overhead applications

Use a low to medium pressure sprayer complete with an extension wand and **fan tip spray size of 0.019-0.021 inches (0.48-0.53 mm).**

Flatwork applications

Use a low to medium pressure sprayer complete with an extension wand and **fan tip spray size of 0.024-0.031 inches (0.61-0.79 mm).**

Hold wand perpendicular to the surface and spray 6 to 10 inches (15 to 25 cm) from the surface.

Alternate spray system

Vertical or overhead applications

Use an *agricultural sprayer* using an approximate 5 gallons per minute (18.93 liters per minute) diaphragm pump and **fan tip spray size of 0.30-0.60 gallons per minute (1.14-2.27 liters per minute).**

Flatwork applications

Use an *agricultural sprayer* using an approximate 5 gallons per minute (18.93 liters per minute) diaphragm pump and **fan tip spray size of 0.50-1.0 gallons per minute (1.89-3.79 liters per minute).**

A backpack or Hudson type sprayer should only be used if applying one bucket or less of material.



IMPORTANT: When using an airless sprayer on freshly placed concrete, be sure to adjust pressure settings so that no surface damage occurs.

NOTE: The use of centrifugal pumps is not recommended.

Spray-Lock Concrete Protection recommends full-slab treatments. If full-slab treatments cannot be performed, then treatments should extend beyond the proposed treatment area to the nearest control joint or construction joint.



Recommended Application Method

- i** | **IMPORTANT:** Spray in 50% overlapping pattern. This ensures that all areas receive two applications of product.

Slab applications

Product should hold a flooded appearance (swimming pool effect) for a minimum of 15 minutes. On areas that rapidly absorb Spray-Lock Concrete Protection (SCP) products and appear dry or without a flood coat, reapply product with sprayer or by redistributing material with a broom. Continue this process until all areas remain flood coated and the concrete stops absorbing material. This is called applying until the point of rejection.



- If pooling or dry areas are observed while flood coating, use a broom to distribute material so that the flood coat remains uniform throughout application area. *Do not allow excess material to dry.* Remove excess SCP products with a foam squeegee after the minimum 15-minute flood coat.
- Foot traffic is allowed one hour after application. Equipment traffic is allowed after 24 hours or when the design professional decides the concrete is strong enough to handle the load.

Broom finishes

Product should be applied with a heavy coat that should be pooled into the broom finish. The product will not have a flooded appearance, but a wet appearance should be maintained for a minimum of 15 minutes. Excess product should be removed using a broom or shop vac.

Slope applications

Product should be applied with a heavy coat. The product will not have a flooded appearance, but a wet appearance should be maintained for a minimum of 15 minutes. Excess product should be removed with a foam squeegee or broom after the 15-minute flood coat.

Overhead and vertical applications

For vertical applications, begin at the bottom and go to the top. Use very light and repeated spray passes over the same area until the concrete surface no longer accepts product. Move to next area after achieving point of rejection.



Time of Placement

SCP 327 should be used at the time of placement. This is defined as applying product within 24 hours of final finish on horizontal surfaces or within 8 hours of form removal for vertical surfaces. Apply SCP 327 after final troweling has been completed and concrete can take foot traffic without damage. Final concrete finish must be unburnished prior to application.

- i** | **Typical Application Rate:** 140-180 ft² per 1 gallon (3.5-4.5 m² per 1 liter). Apply to point of rejection.

Pre-Application

Batch Tickets

SCP recommends that applicators obtain and photo-document at least one batch ticket per concrete placement. The batch tickets contain information about the concrete being placed on that day. The batch tickets will have the mix design number listed and can be referenced against the mix that was submitted to SCP for review. They also can hold valuable information about which admixtures have been added. If there are concerns or questions about admixtures, feel free to email SCP Tech at scptech@spraylock.com or call them at **423.305.6151**.

Admixtures

These are products added to the concrete at the time of batching at the concrete plant. Many of these will have little to no effect on the performance of SCP products. Some admixtures that will not affect or impede the action of SCP products include water reducers, super plasticizers, shrinkage-reducing admixtures, and retarders. Applicators should be aware of which admixtures have been added and used in the concrete mix. Often these admixtures are listed on the batch tickets and can easily be researched via the internet. However, feel free to reach out to SCP Tech with any questions.

Accelerators

This type of admixture is typically used during colder months to help accelerate the setting of the concrete. These admixtures will also accelerate the action of SCP products. If these admixtures are used (check batch tickets), applicators should test a small area prior to a full application. Tests should be conducted approximately every 3,000 to 5,000 ft² (278.71 to 464.52 m²). A test section measuring approximately 3 ft x 3 ft (0.914 m x 0.914 m) is recommended. Apply SCP product to this area and wait 15 minutes. If the SCP product begins to appear milky and turn into a gel or feels very slippery, then the accelerator is still active and the application needs to be delayed one hour. After the hour has passed from the initial test, run another approximate 3 ft x 3 ft (0.914 m x 0.914 m) test area. Continue this process until the product remains unchanged in its normal consistency. Once the SCP product remains unchanged on a test area for a minimum of 15 minutes, full application can begin. Be aware that accelerators can be added at different concentrations throughout the concrete placement (ex: 1% added for first half of placement, then 2% added for last half).

Additives

There are many concrete additives on the market. Some of these will work in conjunction with SCP products, some will not. If a monomolecular evaporation retarder (MMER) is used on the concrete, it should be applied in accordance with the manufacturer's recommendations. ***The following additives should NOT be used*** in conjunction with SCP products: latex additives, waterproofing admixtures, and silicate admixtures.

VISIT: concreteprotection.com



Concrete Finish

The finish of the surface of the concrete is a key part of the SCP product application process. The surface finish should be discussed with the concrete foreman and the superintendent prior to concrete placement. The surface, if hard troweled, should be finished in an open fashion, **avoiding a burnished or black surface** finish. **SCP products need a matte finish.** This finish delivers a surface that will readily accept SCP products while providing a surface that will be acceptable for any type of flooring. SCP recommends watching the finishing process carefully to ensure the concrete is not burnished.



SCP products can be applied to hand finished surfaces, broom finished surfaces, and bull floated surfaces.

For vertical application, SCP recommends checking the form release product for compatibility. Petroleum, oil, and fat-based form releases could interfere with SCP products' ability to penetrate the concrete.



NOTE: Extra time may need to be allowed for concrete to set on broom finished surfaces to ensure no damage to concrete from foot traffic.

Environmental Conditions

SCP products may behave differently throughout the year from season to season. Hot and cold weather present different challenges, but the application can proceed smoothly if the following tips are followed.

Hot Weather

One of the challenges of hot weather applications is rapid evaporation and quicker gelling. SCP recommends pre-wetting concrete when surface temperature is above 90° F (32.2° C). Pre-wetting consists of spraying a light coat of water directly in front of SCP product application. This process helps in preventing rapid evaporation of SCP products from the surface of the slab, allowing for better penetration into the hot concrete. Generally, the SCP products should be squeegeed off the slab after the 15-minute minimum flood time. If the SCP product has not become slippery after 15 minutes, it can be left on the slab for a longer period of time.

Cold Weather

Challenges faced during cold weather applications include low temperature application, accelerator addition, and shorter days. The minimum air and concrete temperature at which SCP products can be applied is 35° F (1.7° C) and rising.

If an accelerator is used in the concrete mix, test a small area about 3 ft x 3 ft (0.914 m x 0.914 m) with SCP products prior to full application. Apply the SCP product to this area and wait 15 minutes. If the SCP product begins to appear milky and turn into a gel or feels very slippery, then the accelerator is still active and the application needs to be delayed one hour. After the hour has passed from the initial test, run another 3 ft x 3 ft (0.914 m x 0.914 m) test area. Continue this process until the product remains unchanged in its normal consistency. Once the SCP product remains unchanged on a test area for a minimum of 15 minutes, full application can begin.

With shorter days during the winter months, longer set times could push SCP product application to a later time when temperatures are too cold. Application may need to take place the following morning. If this is the case the concrete company may need to protect the concrete with blankets.

Rain

A rain event is defined as liquid precipitation that is sufficient enough to cause standing water on the concrete structure. If a light mist is observed that causes no standing water, this is not considered a rain event, and application should not be interrupted.

If a rain event begins during an application, the portion of the slab that has been treated, flood coated for 15 minutes, and squeegeed off is considered treated. If a portion is still in the flood coat stage when it rains, SCP products will need to be reapplied after the rain has stopped. Mark the area last treated so that there is a reference on where to resume application after the rain event. After rain has stopped, the slab should be squeegeed to remove all standing water. Application can continue as normal, beginning after the last treated section of the slab.

During rain events, the concrete contractor always needs to protect the concrete from damage. This should be done per standard operating procedures as the contractor would on jobs without SCP products being applied.

Wind

If the wind is blowing hard enough to prevent the SCP product from puddling on the surface of the concrete or is causing the SCP product to dry rapidly, the application should be postponed. If it is possible, a wind-break may be erected to slow wind down and allow for an application to continue. If this is not possible, application should be postponed until wind slows to a rate that allows for an application to take place or postponed until the following morning.

Post Application

Traffic

Foot traffic is allowed one hour after application. Equipment traffic is allowed after 24 hours or when the design professional decides the concrete is strong enough to handle the load.

Control Joints

SCP requests that control joints are cut after SCP products have been applied. If the control joints are cut prior to the placement of SCP products, the area will need to be cleaned to remove the residue dust from the cutting. SCP products can react with the dust creating a slick surface.

Questions?

We want to help you!
Give us a call or email.

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