



# COLOR SHIELD

*Penetrating Sealer with Integral Stain*

- Water-based Penetrating Nano-Technology Sealer with Integral Color for stain look
- Fast Drying with Low Odor & VOC's
- Bonds Mechanically & Chemically to porous mineral based substrates such as Concrete, Stucco, Pavers, Natural Stone, Saltillo/Clay Tile, Brick & more
- Water Submersible, UV Stable, Oil, Alkali & Weather Resistant
- Extends substrate life cycle - Reduces cracking, freeze/thaw damage, biological growth, efflorescence & soilage pick-up
- Reduces Maintenance Costs



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## Application Instructions

# COLOR SHIELD SYSTEM

PDS-CS-62118

These instructions are not intended to show product recommendations for specific service. They are issued as an aid in determining correct surface preparation, mixing instructions and application procedure. These instructions should be followed closely to obtain the maximum service from the product.

**DESCRIPTION:** Smith's Color Shield system is revolutionary penetrating decorative concrete coloring and sealing system for porous, textured mineral based substrates such as concrete, pavers, natural stone, Stucco, Saltillo/Clay tile, brick and more.

Smith's Color Shield system penetrates porous surfaces yielding a sealer with the look of integrally pigmented or topically stained exterior traffic surfaces leaving no surface film which would alter the slip resistance.

Ideal for Water Parks, Theme Parks, Office Building entrances, Outlet and Strip Malls pedestrian paths and sidewalks, Restaurant Exterior Patios, Hotel Entrances, sidewalks and common areas at Hospitals, Schools, Zoo's, Resorts, Hotels, Pool Decks, Residential Driveways/Patios and more looking for a protective sealer as well as decorative appearances. Dries fast, allowing work to be completed overnight with full traffic in a few hours.

Not only is the Color Shield easy to initially install, but also the product's indefinite inter-coat adhesion makes long term re-application a breeze. A sealer is recommended for patio applications exposed to abrasion created from the movement of tables and chairs as well as dogs larger than 60 lbs.

### HIGHLIGHTS:

- Stain or Monochromatic Appearances possible
- Color & Seal at the same time
- No additional film forming sealer, thus drastically reduces slip and fall issues associated with sealed concrete
- Protective -
- Low Odor during application with no risk of food flavoring/tainting
- Fast Return to Service
- Low VOC's – Meet requirements for all OTC & AQMD regions
- Resistant to Hot Tire Pick-up
- Infinitely Recoatable – Makes for Easily Future Maintenance
- 33 Color Floor options

### NECESSARY TOOLS and EQUIPMENT:

- Plastic Sheeting or Ram Board to cover floor for mix station
- Orbital, Low Speed Floor Machine/Buffer or Auto-scrubber with Nylon Brush head or
- Paint Stir Sticks
- Measuring Cups
- Stucco or Duct Tape for masking
- White Rags (for clean-up)
- 5 gallon Plastic Mixing Buckets
- ½" Non-Shed Paint Roller and Roller Frame with an extension pole (optional for Green Clean Pro application)
- Pump Sprayer
- Soft Bristle, Exploded Tip Push Broom
- Water (for clean up)

**SURFACE PREPARATION:** The surface preparation phase should be viewed as the most important. Proper preparation results in the product's longevity, minimizes potential failures and creates the best environment for an aesthetically pleasing work of art. *Do not use an acid etch as a cleaning/preparation method.* New concrete must be allow to cure to full design strength, typically a minimum of 28 days.

### PREPARATION OPTION 1 – Smith's Green Clean Pro:

**Step 1** - Remove paint, adhesives and loose particles from the intended application surface.

**Step 2** - Liberally apply Smith's Green Clean Pro to a 20' x 20' section of the substrate or smaller with a pump up sprayer or dip and roll method with a ½ inch nap roller cover. Wetting the intended treatment area with water is recommended for application in hot weather or direct sun exposure.

Allow Green Clean Pro to remain on the substrate for 20 minutes. Do not allow to dry on the substrate. Mist water via hose or pump up spray to keep treated area from drying.

**Step 3** - Utilize a 12,000 work units\* pressure washer in conjunction with a Zero degree rotating nozzle tip to remove and rinse. Continue to flush and agitate the substrate until the rinse water is clear.

**Step 4** - Allow substrate to thoroughly dry.

**Step 5** - Perform a **Tape Test**.

\*Work Units = Gallons per minute x PSI

**Note:** If additional profile is desired, reapply Smith's Green Clean Pro following the previous instructions.

### PREPARATION OPTION 2 – Abrasive Media Blasting:

**Abrasive Media:** (sand, soda or other media)

**Step 1** - Create profile/remove previous coating via abrasive blasting.

**Step 2** - Remove abrasive material with vacuum.

**Step 3** - Remove remaining dust and particulates with micro-fiber pad or leaf blower for exterior application

**TAPE TEST:** A tape test will help determine the effectiveness of the cleaning process. After the substrate has been thoroughly scrubbed, rinsed and allowed to dry; apply several 1 foot long strips of high quality 2" clear packaging tape to various locations on the intended application substrate. Aggressively press the tape onto the substrate with the heel of your hand. Fold one end of the tape into itself and pull it off of the surface as vigorously as possible. Examine the adhesive layer in a bright light looking for residue that was pulled from the substrate. Little to no dust or other foreign particles should be visible. Areas with visible foreign material need to be rinsed again until the surface is free of these contaminants.







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### **SURFACE PREPARATION SENSITIVE SUBSTRATES** (i.e. Pavers, Stucco, etc.):

Remove dust, dirt, oil, grease, curing compounds, other coatings, efflorescence and other foreign materials. Please note the following instructions are a guide to clean pavers, not a guide to remove previously applied coatings.

**Step 1** - Dampen substrate with water.

**Step 2** - Liberally apply diluted Smith's Neutral Clean to a 10 x 10 section of the substrate. Surface must be kept damp for optimal cleaning.

**Step 3** - Using a floor buffer with a nylon brush head (large areas) or deck brush (small areas), scrub the treated area using cross hatching pattern. For Heavy Duty Cleaning – allow solution to dwell for 10 minutes then re-agitate for deeper cleaning. Surface must be kept damp to achieve optimal cleaning.

**Step 4** - Flush substrate with potable (clear/clean) water. Continued agitation will help thoroughly clean heavy build areas. Continue to flush substrate until rinse water is clear.

**NOTE:** Areas with heavy dirt build may require multiple cleanings to achieve desired appearance.

**DILUTION RATIO FOR COLOR SHIELD:** Color Shield is achieved by mixing of Smith's Nature Shield with Smith's Color Floor at the following ratio (parts by volume):

- |                 |         |
|-----------------|---------|
| ○ Nature Shield | 8 parts |
| ○ Color Floor   | 1 part  |

(e.g. 4 ounces of Color Floor can be added to 32 ounces on ready to use Nature Shield).

If increased color opacity is desired, either apply a 2<sup>nd</sup> pass of Color Shield once the 1<sup>st</sup> application is dry or decrease the ratio as low as 4 Parts Smith's Nature Shield with 1 Part Smith's Color Floor to reduce transparency.

**TEST AREA:** Always perform a test area on the intended application substrate to confirm appearance and product viability.

### **APPLICATION INSTRUCTIONS:**

**Step 1** - Apply the Color Shield to the intended area via a pump up sprayer.

**Step 2** - Massage color into textured substrate with a soft bristle push broom making a figure eight pattern (broom finished concrete – follow the broom pattern). Continue to massage Color Shield into the substrate until dry.

**Step 3** - Additional color can be added utilizing the same technique to achieve desired appearance.

**REPAIRS / FUTURE RECOATING:** Smith's Color Shield has indefinite inter-coat adhesion to itself. Older slabs or very porous substrates may require additional applications of Smith's Color Shield to achieve desired appearance. Allow initial coat to dry before applying additional coat on fresh Color Shield applications.

For future repairs and recoats, always clean the substrate with Smith's Neutral Clean agitating with a low speed floor buffer with a soft nylon brush head (large areas) or a deck brush (small areas), scrub the treated area using cross hatching pattern. For Heavy Duty Cleaning – allow solution to dwell for 10 minutes then re-agitate for deeper cleaning. Surface must be kept damp to achieve optimal cleaning. Thoroughly rinse while still wet using either an auto-scrubber or a pressure washer until rinse water remains clear and suds free. Allow to dry before attempting to touch-up damage or recoat.

**MAINTENANCE:** For ongoing maintenance, removal of debris and dust may be achieved using a leaf blower, soft to medium bristle push broom or a ride-on sweeper/scrubber for large areas. Cleaning cannot occur too often. Inefficient cleaning procedures will reduce the longevity causing the concrete finish to wear out prematurely and possibly stain or discolor depending on what comes in contact with the surface. Clean up liquid spills quickly.

Avoid the use of Polypropylene or abrasive bristle (Tyrex®) brushes as these brushes will cause the development of scratch patterns and will prematurely erode the surface of concrete. Use the least aggressive pads or brushes available when using an Auto-scrubber or low speed floor machine to wet clean the floor, such as Nylon or white pads to maximum your investment. Allowing abrasion particles and debris to be traffic ground into the floor for extended periods of time cause erosion.

- **Regular Maintenance** = Blow off with leaf blower, broom, or hose off dust with water only; mopping/auto-scrubbing with water as needed; spot clean spills and oils as necessary
- **Heavy Commercial Traffic** = Blow off, Sweep or hose off dust and debris with water only; mopping/auto-scrubbing with water as needed; spot clean spills and oils as necessary
- **Heavy Duty Cleaning** – Smith's Neutral Clean in conjunction with a Sweeper/Scrubber, Auto-scrubber with nylon bristle bristles, or a (no closer than 16 inches from surface to avoid marring the concrete finish). Allow cleaning solution to dwell for 10 minutes prior to rinsing and/or agitation for deeper cleaning. Surface must be kept damp to achieve optimal cleaning. **DO NOT ALLOW DETERGENT TO DRY ON THE SURFACE BEFORE RINSING.**
- **Oil Removal** - Use [Smith's Oil Clean](#), or similar degreaser, to remove oil and grease build-up utilizing a Pressure Washer utilizing a 45° Fan Tip Nozzle or an Auto-scrubber with a nylon brush to agitate and clean water rinse.

When using a detergent, always use the least aggressive detergent necessary to remove the residue. Never use Simple Green or similar to clean walking surfaces due to slip hazards from the detergent residue.





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### CAUTION:

- Do not drag or drop heavy objects across any horizontal as scratching, gouging or chipping may occur to the surface. This includes the tip of the forks on a forklift, nails protruding from a pallets, etc.
- Avoid spinning tires. The friction of a spinning tire may erode concrete, pavers, bricks, etc.

**SLIP RESISTANCE:** Smith's Color Shield system penetrates the porous surface without altering the co-efficient of friction of the traffic bearing surface. There will be no improvement to traction nor diminished traction due to use of this system. If the surface was slippery prior to being sealed, it will remain as such and a film forming sealer would be recommended in place of this system so that an angular traction additive may be utilized as Smith's Color Shield/Nature Shield cannot suspend an aggregate medium. Smith Paint Products recommends the use of angular slip-resistant aggregate in all coatings that may be exposed to wet, oily or greasy conditions as well as any condition where increased traction may be necessary.

It is the contractor and end users' responsibility to determine the appropriate traction needs and footwear necessary for the conditions as well as setting performance parameters prior to beginning the application, testing to determine parameters have been met upon completion to achieve the end users documented safety standards.

Mock-ups are highly recommended as part of the evaluation process to determine the appropriate amount of slip-coefficient necessary for the environment.

**MOISTURE/ALKALINITY:** The absence of an effective moisture vapor barrier may create an environment for moisture vapor transmission as well as high levels of alkalinity in concrete slabs. Moisture testing is extremely important has part of the investigation process prior to quoting a project and should occur following the most current industry accepting testing methods, such as, a Calcium Chloride test (ASTM F-1869) and/or Relative Humidity probe (ASTM 2170). It is the contractor's responsibility to determine the moisture vapor transmission and pH of a floor. It is the contractor's responsibility to determine whether or not a substrate is sound, solid and suitable.

Smith Paint Products is not responsible for discoloration or efflorescence development due to the presence of high moisture vapor emissions nor high levels of alkalinity.

**LIMITED LIABILITY:** Liability is limited to replacement of defectively manufactured product with same type and cost of the original purchased product upon presentation of a valid, fully paid invoice at the time of a claim. No warranty shall be granted for outstanding invoices or for accounts with unpaid balances until paid in full. No damages, whether consequential, liquidated or other, shall be provided under this Limitation of Liability and Limited Warranty. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SMITH PAINT PRODUCTS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MECHANABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SHOULD YOU NOT AGREE WITH ANY OF THE ABOVE TERMS, DO NOT PURCHASE THE PRODUCT(S). Should a product defect be suspected at the time of application, cease use of the product immediately and notify Smith Paint Products for investigation otherwise you will be responsible for the cost to repair or replace any work performed with product(s) suspected of defect. Record batch codes and save all products you purchased in order for any warranty to occur allow with the invoice that matches said quantity. Defects determined after installation must be reported to Smith Paint Products within 10 business days of discovery.

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