



Product Data Sheet

NS-PDS-07232026

PENETRATING SEALER NATURE SHIELD

**Natural Appearance, Low Odor
Water, Oil & Stain Repellant
Aliphatic Polyurethane Sealer**

DESCRIPTION: Smith's Nature ShieldSM is a water, oil & stain repellent penetrating sealer developed to both mechanically & chemically bond to a wide variety of previously unsealed, absorbent mineral based substrates including, but not limited to concrete, stucco, pavers, natural stone, clay tile (Saltillo tile), & brick.

Smith's Nature Shield is effective for applications where oil & stain resistance as well as water repellency is desired to reduce undesired stains, cracking, freeze / thaw damage, chemical degradation, biological growth, efflorescence & dirt pickup.

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

RECOMMENDED USE: Exterior use over porous, textured previously unsealed mineral based substrates, such as:

- Natural Stone
- Brick
- Fully cured concrete
- Plaster
- Stucco
- Clay Tile (Saltillo tile)
- Pavers
- Terra Cotta

NOT RECOMMENDED FOR:

- Non-porous, smooth trowel finished or dense substrates (e.g. stamped concrete, polished/densifier/burnished concrete, power-trowel, polymer modified overlays or other dense surface finishes)
- Interior Floors
- Not for use over stains, sealers or other film forming layers

HIGHLIGHTS:

- Excellent beading for improved aesthetics
- Minimal change in appearance & slip resistance once dry
- Low Odor & Low VOC's
- Fast Air Dry
- Ultraviolet Light Stable
- Overnight Deliverable – no Red Label
- Repels oil, water & stains
- Extends substrate life cycle
 - Improves Freeze / Thaw Resistance
 - Reduces Chemical Degradation
 - Minimizes crack development
 - Improves aesthetics by reducing dirt pickup, biological growth, & stain development especially in higher traffic patterns
- Lowers maintenance costs
- Reduces moisture wicking & efflorescence development



STORAGE: Indoors between 40°F (4.4°C) to 100°F (38°C)

SHELF LIFE:

1 Year in original, unopened containers;
Once opened – Use within 3 months

COLOR: Milky in liquid state, dries clear without darkening / color enhancement

*Smith's Nature Shield can be mixed with [Smith's Color Floor](#) or [Smith's Color Wall](#) to yield [Smith's Color Shield System](#) using any of the available 33 colors

AVAILABLE SIZES:

1 Gallon Jug • 5 Gallon Pails • *50 Gallon Drums • *250 Gallon Totes

*Non-stock size – Made-to-Order

CURE TIMES (Approx. 0.58 mils DFT @ 72°F (22.2°C) / 50% Relative Humidity):

Pot-Life	Ready-to-Use
Light Rain Exposure	≥4 hours
Foot Traffic	≥90 minutes
**Repellency - Initial Beading - Full	Typically 24 hours 7 days
Heavy Traffic (i.e. Planters, parked vehicles, etc.)	Overnight

* Anticipate a longer cure time at cooler application temperatures

** Repellency begins to develop within 24 hours, completed in 1 week.
Beading generally improves with time

SUBSTRATE SURFACE TEMPERATURE:

	Material	Surface	Ambient	Humidity
Best	60°F to 86°F (15.5°C to 30°C)	65 to 86°F (18.3°C to 30°C)	65 to 90°F (18.3°C to 32.2°C)	10% to 60%
Min.	50°F (10°C)	50°F (10°C)	50°F (10°C)	0%
Max.	95°F (35°C)	95°F (35°C)	95°F (35°C)	80%

*Avoid application within ±5° of Dew Point Temperature

** Do not apply sealer when substrate has direct sun (high noon).

CURED COATING PROPERTIES (DRY FILM):

PROPERTY	TEST METHOD	RESULTS
Solids Content	ASTM	9.7% (± 0.1%) (*If sealed, see topcoat product data sheet)
Approximate Shipping Weight		
- 1 Gallon Jug		9 lbs. (4.04 kg)
- 5 Gallon Pail		45 lbs. (20.05 kg)
- 50 Gallon Drum		450 lbs. (200.5 kg)
- 250 Gallon Drum		2,250 lbs. (1,002.5 kg)
VOC's	ASTM D3960	23 g/L
Flash Point	ASTM D3278	212°F (100°C)

*Taber Abrasion Resistance Test performed by independent laboratory, Architectural Testing, Inc. Abrasion resistance values of Smith's Color Wall are comparable to acid-based stain. Full report of Architectural Testing, Inc.'s Taber Abrasion Resistance Test is available upon request.

APPROXIMATE COVERAGE (8 mils WFT)

Coverage Equation: $1604 \div \text{milage} = \text{Wet Film Thickness}$

*Coverage varies due to thickness, floor profile & substrate absorbency

PACKAGE SIZE	APPROXIMATE COVERAGE
1 gallon (3.78 L)	200 sq.ft. (18.58 m ²)
5 gallons (18.9 L)	1,000 sq.ft. (92.9 m ²)
50 gallon (189 L)	10,000 sq.ft. (929 m ²)
250 gallons (945 L)	50,000 sq.ft. (4,645 m ²)



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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 & application procedure. These instructions should be followed closely to obtain the maximum service from the product.

LIMITATIONS:

- NOT intended for interior use
- NOT intended for use over non-porous, smooth trowel finished or dense substrates (e.g. stamped concrete, polished/densifier/burnished concrete, power-trowel, polymer modified overlays or other dense surface finishes)
- NOT for use over stains, existing sealers or other film forming layers
- Avoid application over hot surfaces (e.g. holding your bare hand to the surface for more than 30 seconds becomes uncomfortable) as the product will flash cure and/or poorly penetrate the substrate
 - Direct sunlight causes concrete to absorb heat; therefore, the surface temperature can be 20°F to 30°F (11°C to 17°C) hotter than the surrounding air.
 - e.g. 95°F / 35°C air temperature with direct sunlight exposed concrete can easily exceed 125°F / 51.7°C surface temperature
- Surface preparation is required for both newly cured & old, existing concrete
 - New concrete also requires proper curing prior to application
- **DO NOT USE MURIATIC/HYDROCHLORIC ACID TO PREPARE CONCRETE AS CHLORIDE CONTAMINATION CAN OCCUR**, especially with Type 1L concrete
- When etching, ensure all [Smith's Green Clean Pro](#)™ has been thoroughly removed with potable water with no remaining soapy residue or cement slurry
- **DO NOT USE [Smith's Green Clean Pro](#) on "Green" new concrete less than 30 days old, smooth / hard trowel finished or previously sealed / coated / painted concrete to include any type of curing compound**

NECESSARY TOOLS & EQUIPMENT:

- Plastic Sheetting or Ram Board to cover substrate for mix station
- Pressure Washer with Zero Degree rotating nozzle
- 1/2" Nap Paint roller with roller frame & extension pole (for preparation with [Smith's Green Clean Pro](#))
- Nylon deck brush or nylon grit brush head attached to a floor machine (for preparation with [Smith's Green Clean Pro](#))
- Measuring Cups (only necessary for [Smith's Color Shield system](#))
- Paint Stir Sticks
- Vinyl or solvent resistant Masking Tape
- White Rags (for clean-up)
- Sprayer (e.g. HVLP, airless or pump)
- Soft bristle, exploded tip push broom or non-shed 3/8" nap paint roller cover
- Soap & Water (For tool clean up)



AREA PREPARATION: Be sure to mask or cover all areas that are not intended to be stained including but not limited to door frames, doors, walls & windows.

SUBSTRATE PREPARATION: Whether new or old concrete, the surface preparation phase should be viewed as the most important.

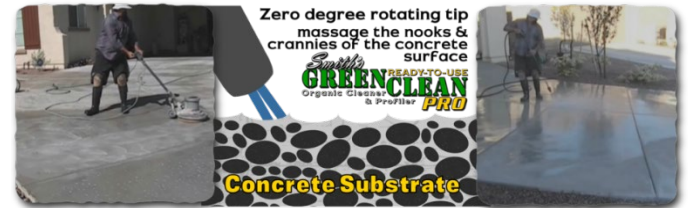
Proper preparation optimizes longevity, minimizes potential failures, creates the best environment for proper sealing application. In short, the more detail & time allotted to this phase of the project will dramatically affect appearance & durability.

The surface must be free of all foreign materials that would inhibit absorption of Smith's Nature Shield. Foreign materials include, but are not limited to grease, oil, dirt, glue, previous coatings & sealer*.

***Do NOT Acid Etch as a cleaning method.**

****Surface preparation is required for both newly cured & old concrete**

HORIZONTAL PREPARATION:



Exterior (Click for video) – [Smith's Green Clean Pro](#) can be used to create texture as well as remove form release in addition to preparation & cleaning of mineral based substrates.

For surface preparation, the directions are as follows:

- 1) Allow newly placed concrete to cure for at least 28 days to avoid damaging the surface while preparing
- 2) Remove large debris, paints, adhesives & loose particulates from the intended application surface
- 3) Liberally apply [Smith's Green Clean Pro](#) to a 20 ft. x 20 ft. or smaller section of the substrate using a 1/2 inch nap non-shed roller cover

Prepare using Pressure Washer & [Smith's GREEN CLEAN READY-TO-USE Organic Cleaner & Profiler PRO](#)
- 4) Allow [Smith's Green Clean Pro](#) to dwell / remain on the substrate for 20 to 30 minutes
 - Ensure the surface remains wet for the entire dwell time by misting with water, if necessary
 - **DO NOT ALLOW [Smith's Green Clean Pro](#) to dry on the surface**
- 5) Agitate [Smith's Green Clean Pro](#) utilizing a nylon brush while rinsing with clean potable water
- 6) Open the pores of the surface via power washing*.
 - Use parallel overlapping line patterns to ensure proper surface cleaning

***Power wash = Zero degree rotating nozzle with 12,000 work units (Work Units = Gallons per Minute x PSI)**

- 7) Broom finishes may result in high profiles or peaks in the substrate which erode faster than the remaining substrate
 - Remove these unstable sections by simply running an ice scraper or other metal object over the substrate
 - Extract debris from substrate
 - This step will enhance the longevity & durability of the install
- 8) Remove [Smith's Green Clean Pro](#) from the surface using a power washer* with overlapping line patterns
- 9) Allow the area to dry adequately then perform a tape test & absorption test to confirm successful preparation (See Next Page for testing description)

***Refer to ICRI Guideline 310.2R2013; ISO 8505-3; ASTM D4261, D4258, & D4260 for more in-depth preparation details & recommendations**

Should additional profile be desired, reapply [Smith's Green Clean Pro](#) following the previous directions starting at 3 above.



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VERTICAL PREPARATION: [Smith's Green Clean Pro](#) should be utilized to prepare the substrate & may be used to create texture in the substrate or remove to form release products.

- 1) Allow newly placed concrete to cure for at least 28 days to avoid damaging the surface while preparing
- 2) Remove large debris, paints, adhesives & loose particulates from the intended application surface
- 3) Liberally apply [Smith's Green Clean Pro](#) to a 20 ft. x 20 ft. section of the substrate using a ½ inch nap roller cover
- 4) Liberally apply with a pump up sprayer [Smith's Green Clean Pro](#) diluted with 3 parts potable water
- 5) Allow the [Smith's Green Clean Pro](#) solution to remain on the substrate for 10 to 15 minutes
- 6) Agitate treated area(s) with stiff bristle deck brush to clean heavy build obstinate materials
 - Treated area must remain wet in order for Green Clean to stay active
 - **Do not allow [Smith's Green Clean Pro](#) to dry on the substrate**
- 7) Utilizing a 12,000 work units* pressure washer in conjunction with a Zero (0) degree rotating tip, remove the [Smith's Green Clean Pro](#) with an overlapping line pattern to open the pores of the substrate

* Power wash = Zero degree rotating nozzle with 12,000 work units
(Work Units = Gallons per Minute x PSI)
- 8) Allow the area to dry adequately before performing a **Tape Test**

NOTE: If additional profile is desired, reapply [Smith's Green Clean Pro](#) following the previous instructions

- 9) Proceed with sealer application once successfully testing has been completed (See "DETERMINING IF PREPARATION IS SUFFICIENT" section)

*Refer to ICRI Guideline 310.2R2013; ISO 8505-3; ASTM D4261, D4258, & D4260 for more in-depth preparation details & recommendations

Should additional profile be desired, reapply [Smith's Green Clean Pro](#) following the previous directions starting at 3 above.

SENSITIVE SUBSTRATES (i.e. pavers, stucco, etc.): Remove dust, dirt, oil, grease, curing compounds, other coatings, efflorescence & other foreign materials. Grease & oil hydrocarbons may be removed with [Smith's Oil Clean](#), however, stains may remain, especially if the oil / grease contained dyes or non-hydrocarbon components. Ensure no soap suds remain after thoroughly rinsing.

NOTE: The following instructions are a guide to clean pavers, stucco, etc., NOT as a guide to remove previously applied coatings or sealers.

- 1) Dampen substrate with clean, potable water
- 2) Liberally apply a neutral pH detergent diluted to the maximum recommended dilution ratio with potable water then spray apply with a pump up sprayer to a 10 ft. x 10 ft. section of the substrate. Surface must remain damp for optimal cleaning
- 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 while ensuring the area remains water by misting with water as needed then re-agitate for deeper cleaning. Surface must be kept damp to achieve optimal cleaning.

- 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 with no soap suds
- 5) Allow the area to dry adequately before performing a **Tape Test**
- 6) Proceed with sealer application once successfully testing has been completed (See "DETERMINING IF PREPARATION IS SUFFICIENT" section)

*Refer to ICRI Guideline 310.2R2013; ISO 8505-3; ASTM D4261, D4258, & D4260 for more in-depth preparation details & recommendations

NOTE: Heavy dirt build up areas may require multiple cleanings to achieve desired appearance & absorption.

ABRASIVE BLASTING (including sand, soda & other mediums):

- 1) Create profile/remove previous coating via abrasive blasting
- 2) Remove abrasive material with vacuum
- 3) Remove remaining dust & particulates with micro-fiber pad or leaf blower for exterior application
- 4) Perform a Tape & Absorption Test

DETERMING IF PREPARATION IS SUFFICIENT:

- 1) Perform Tape Test, see next paragraph, once surface is prepared, clean & dry
- 2) Next, check absorption per [ASTM F3191](#) to ensure a water droplet darkens & begins to soak into the concrete within 1 minute after being dripped onto the surface

*Refer to ICRI Guideline 310.2R2013; ISO 8505-3; ASTM D4261, D4258, & D4260 for more in-depth preparation details & recommendations

Tape Test – A tape test will help determine the effectiveness of the cleaning process. After the substrate has been thoroughly scrubbed, rinsed & allowed to dry; apply several 18 inch long strips of high quality 2 inch width clear packaging tape to various locations on the substrate.

Aggressively press the tape onto the substrate with the heel of your hand. Fold one end of the tape into itself then pull it off of the substrate as vigorously as possible. Examine the adhesive layer in a bright light looking for residue that was pulled from the surface.

Little to no dust or other foreign particles should be visible. Areas with visible foreign material need to be scrubbed & rinsed again until the surface is free of these contaminants.

APPLICATION: Smith's Nature Shield may be applied via push broom (best), brush, roller, or sprayer (i.e. Airless, HVLP, pump).

Additional applications of Smith's Nature Shield may be required to ensure substrate achieves full saturation as well as proper repellency.

Apply a Test Area – Always perform a test area on the intended application substrate to confirm appearance & product viability.



A typical pump up sprayer provides an easy, economical method of application. The use of an HVLP or airless sprayer is viable options for application of product.

Spray on in a fine, fog pattern, without spurts or dribbles, to form a thin, continuous film then work into the surface (see below methods).

Avoid puddling in low areas. If puddles occur, brush, broom or roll them out to surrounding areas ensuring no excess sealer remains.



Smith's Nature Shield may be rolled onto substrate via a dip & roll method utilizing a premium, non-shed 3/8" nap paint roller.

Do not allow excess puddles. If puddles occur, brush or roll them out.

Ensure substrate has achieved full saturation.

Older slabs or very porous substrates may require additional coats of Smith's Nature Shield to ensure the substrate achieves full saturation & proper water repellency.



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Material can be poured onto the substrate then distributed using a soft bristle, exploded tip push room to work Smith's Nature Shield into heavy textured substrate surface.

Do not allow excess puddles. If puddles occur, brush, broom or roll them out.

Application



See application guide for [Smith's Color ShieldSM system](#) when using Smith's Nature Shield mixed with Smith's Color Floor or Smith's Color Wall stains.

Please note, roller or brush application of [Smith's Color Shield system](#) (i.e. Smith's Nature Shield mixed with Smith's Color Floor or Smith's Color Wall) may achieve mechanical lines, therefore, rolling or brush application is not recommended for aesthetic reasons.

Sealing of Pavers / Natural Stone / Porous Tile / Countertops / Grout



Surface must be clean, absorbent, dry & free of dust, dirt, oil, grease curing compounds, other coatings / sealers, efflorescence & other foreign materials prior application of Smith's Nature Shield.

Utilize traditional bristle brush application for more controlled application to corners, control joints, grout lines, etc.

Follow instructions for Roller Application on bottom right column of page 3.

RECOATING: Smith's Nature Shield has indefinite inter-coat adhesion to itself. Older slabs or very porous substrates may require additional coats of Smith's Nature Shield to ensure the substrate has achieved full saturation as well as proper water repellency.

Allow initial coat to dry before applying additional coat.

SUBSTRATE SURFACE TEMPERATURE:

	Material	Surface	Ambient	Humidity
Best	60°F to 86°F (15.5°C to 30°C)	65 to 86°F (18.3°C to 30°C)	65 to 90°F (18.3°C to 32.2°C)	10% to 60%
Min.	50°F (10°C)	50°F (10°C)	50°F (10°C)	0%
Max.	95°F (35°C)	95°F (35°C)	95°F (35°C)	80%

*Avoid application within $\pm 5^\circ$ of Dew Point Temperature

** Do not apply sealer when substrate has direct sun (high noon)

REPELLENCY: Optimal curing condition is 73°F, Relative Humidity 50% and airflow. Repellency begins to develop within 24 hours, completed in 1 week. Beading generally improves with time.

CLEAN UP: Immediately clean-up work area & tools with water while still wet.

Once dry, tools may be cleaned using Acetone, Toluene or Xylene.



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