



# NATURE SHIELD

## SELECTION DATA

**GENERIC TYPE:** water-based aliphatic polyurethane / flourochemical technology

**GENERAL PROPERTIES:** priming/penetrating water, oil and stain repellent developed to both mechanically and chemically bond to a wide variety of mineral substrates including, but not limited to concrete, stucco, pavers, natural stone, clay tile (Saltillo tile), and brick. This product is effective for applications where oil and stain resistance as well as water repellency is desired to reduce undesired stains, cracking, freeze / thaw damage, chemical degradation, biological growth, efflorescence and dirt pickup. Nature Shield serves a primer (excellent intercoat adhesion) for various Smith's Decorative Concrete Products

- Primer coat / mitigates moisture transfer
- Extends substrate life cycle
- Reduce maintenance costs
- User friendly
- Low VOC
- UV Stable
- Minimal change in substrate appearance
- Excellent beading for improved aesthetics
- Overnight Deliverable - no Red Label

**RECOMMENDED USE:** Mineral substrates, fully cured concrete (28 days)

**NOT RECOMMENDED FOR:** Non porous, smooth troweled or previously coated substrates.

**COLOR:** milky in liquid state, dries clear. Color options available.

## SPECIFICATION DATA

### SOLIDS CONTENT:

	<u>By Volume</u>
Smith's Nature Shield	9.7% ± 0.1%

### VOLATILE ORGANIC CONTENT:

As supplied	23.5 g/l
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## COVERAGE PER GALLON:

200 square feet

NOTE: Coverage depends on surface porosity, profile and application method.

## STORAGE CONDITIONS:

Temperature: 32-100°F

## SHELF LIFE:

Unopened Container 1 year

## ORDERING INFORMATION

Prices may be obtained from Smith Paint Products, Sales Representative or local Smith's Decorative Concrete Products Dealer.

## APPROXIMATE SHIP WEIGHT:

	<u>1 gal</u>	<u>5 gal</u>
Smith's Nature Shield	9 lbs	45 lbs

## FLASH POINT:

Smith's Nature Shield >200°F

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

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

**SURFACE PREPARATION:** The surface preparation phase should be viewed as the most important. Proper preparation maximizes the product's longevity while minimizing potential failures. In short, the more detail and time allotted to this phase of the project will dramatically affect the appearance and durability of the finished installation.

**Do not use an acid etch as a cleaning method.**

### APPLICATION TO HORIZONTAL CONCRETE:

- 1) Allow newly placed concrete to cure for 28 days.
- 2) Remove paint, adhesives and loose particulates from the intended application surface.
- 3) Liberally apply Smith's Green Clean to a 20 feet x 20 feet section of the substrate with ½ inch nap roller cover.
- 4) Allow the gel to remain on the substrate for 20 minutes. Treated area must remain wet in order for Green Clean to stay active. **Do not allow Green Clean to dry on the substrate.**
- 5) For exterior application, utilizing a 12,000 work units\* pressure washer in conjunction with a 0 (zero) degree rotating tip, remove the Smith's Green Clean with an overlapping line pattern. For interior surface preparation, agitate Smith's Green Clean utilizing a floor buffer (small area) or an auto-scrubber (large area) with Mal-grit brush attachments while rinsing with clean water. Extract material utilizing a wet/dry vacuum or lower the squeegee uptake bar on the auto-scrubber. Continue to flush and agitate the substrate until the rinse water is clear.
- 6) Allow surface to thoroughly dry.
- 7) Perform a **Tape Test**.

### APPLICATION TO VERTICAL CONCRETE:

- 1) Clean pores utilizing a 12,000 work units\* pressure washer in conjunction with a 0 (zero) degree rotating tip. Use a parallel overlapping line pattern to insure proper surface preparation.

The application of **Smith's Green Clean** can be used to create texture in the substrate or remove form release products. For this surface preparation, the directions are as follows:

- 1) Remove paint, adhesives and loose particulates from the intended application surface.

- 2) Liberally apply with a pump up sprayer Smith's Green Clean diluted with 3 parts potable water.

- 3) Allow the Green Clean solution to remain on the substrate for 10-15 minutes. Agitate treated area(s) with stiff bristle brush to clean heavy build obstinate materials. Treated area must remain wet in order for Green Clean to stay active. **Do not allow Green Clean to dry on the substrate.**

- 4) Utilizing a 12,000 work units\* pressure washer in conjunction with a 0 (zero) degree rotating tip, remove the Smith's Green Clean with an overlapping line pattern.

- 5) Allow the area to dry adequately before performing a **Tape Test**. Upon the completion of a successful test begin the installation.

\*Work Units = Gallons per minute x PSI

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

### MECHANICAL ABRASION:

#### Grinding:

- 1) 1st Pass = 40 grit metal bonded diamonds (or comparable) if the surface requires (e.g. adhesives, profile irregularities)
- 2) 2nd Pass = 150 grit metal bonded diamonds (or comparable).
- 3) Inspect the substrate for scratch patterns created by the grinding process. If a scratch pattern exists, continue the grinding process to achieve a properly prepared substrate. Wet grinding must be used with resin bonded diamonds to avoid transfer of the resin to the substrate.

#### Dry Grinding:

- 3) Remove excess dust with vacuum.
- 4) Remove remaining dust and particulates with micro-fiber pad. A minimum of 3-4 passes over the substrate with a new/clean micro-fiber mop per pass will remove residual dust. The use of an auto-scrubber with brush attachment in conjunction with clean water can be used to extract particulate. Continue to clean substrate until extracted water is clear.

#### Wet Grinding:

- 3) Remove slurry from floor via wet vacuum or auto-scrubber with brush attachment in conjunction with clean water.
- 4) Continue to clean substrate until extracted water is clear. Perform **Tape Test** once substrate is prepared and dry.

#### Abrasive Blasting: (including sand, soda other mediums)

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





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- 2) Remove abrasive material with vacuum.
- 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 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.

**PAVERS / NATURAL STONE / POROUS TILE / COUNTERTOP / GROUT:** Surface must be free of dust, dirt, oil, grease curing compounds, other coatings, efflorescence and other foreign materials before application of Smith's Nature Shield.

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

**MIXING INSTRUCTIONS:** For optimum performance, gentle mixing or agitation is recommended.  
**CAUTION: DO NOT MIX EXCESSIVELY.**

**APPLICATION METHOD:** Smith's Nature Shield may be applied via brush, roller, pump up, HVLP or airless spray.

**SPRAY APPLICATION:** 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. Avoid excess puddling in low areas. If puddles occur, brush or roll them out. Additional applications of Smith's Nature Shield may be required to ensure substrate has achieved full saturation.

**ROLLER APPLICATION:** Use a 1/2 inch (heavy textured substrate) or 3/8 inch non-shed roller cover. Smith's Nature Shield can be rolled onto substrate via a dip and roll method.

Material can also be poured onto the substrate and distributed. Do not allow excess puddles. If puddles occur, brush or roll them out. Additional applications of Smith's Nature Shield may be required to ensure substrate has achieved full saturation.

**BRUSH APPLICATION:** Utilize traditional bristle brush application for more controlled application to corners, control joints, grout lines, etc. Follow instructions for Roller Application.

**RECOATING:** Smith's Nature Shield has indefinite inter-coat adhesion to itself. Older slabs or very porous substrates may require additional applications of Smith's Nature Shield to ensure substrate has achieved full saturation. Allow initial coat to dry before applying additional coat

### APPLICATION DIRECTIONS:

	<u>Material</u>	<u>Surface</u>	<u>Ambient</u>	<u>Humidity</u>
Best	60-85°F	65-85°F	65-90°F	10-60%
Minimum	50°F	50°F	50°F	0%
Maximum	95°F	95°F	95°F	80%

Note: 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:** While Smith's Nature Shield is still wet, equipment may be cleaned with soap and water. Once dried, the material may be removed from tooling with a solvent, such as Xylene, Acetone or Toluene

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