

WaterShield REPELLENT

Clear, Natural Appearance, Water-based Silicone Penetrating Sealer

DESCRIPTION: Penetrating water repellent sealer which develops a mechanical and chemical bond to a variety of mineral based porous substrates, including but not limited to, concrete, stucco, pavers, natural stone, Saltillo tile and brick. Smith's Water Shield is effective for applications where excellent water repellency is desired to reduce cracking, freeze / thaw damage, chemical degradation, biological growth, efflorescence and dirt pickup without darkening nor enhancing the color of the substrate.

RECOMMENDED SEALER FOR:

- Porous Mineral Based Substrates such as:
 - Brick
 - Previously unsealed Concrete (>28 days old)
 - Pavers
 - Saltillo Tile (Clay)
 - Stucco
 - Natural Stone

**NOT INTENDED for use over smooth, dense or previously sealed / painted surfaces*

HIGHLIGHTS:

- Extends substrate life cycle
- Reduce maintenance costs
- User Friendly
- Low VOC
- U.V. Stable
- Freeze / Thaw Stable
- Minimal change in substrate appearance
- Excellent beading for improved aesthetics
- Overnight deliverable – No Red Label shipping

STORAGE:

Indoors between 40°F (4.4°C) to 100°F (37.7°C)

SUBSTRATE SURFACE TEMPERATURE:

45°F (7.2°C) to 100°F (37.7°C) with up 80% Humidity

SHELF LIFE:

24 Months (original, unopened containers); 30 days (once opened)

UNIT SIZES:

- SPS-105-128 1 gallon jug
- SPS-105-640 5 gallon pail

COLOR:

White Liquid – Clear, Natural Appearance once dry

CURE TIMES (@ 50% Relative Humidity):

<small>*Temperature & humidity affect cure rate</small>	60°F	72°F	85°F
Working Time	20 min.	15 min.	8 min.
Recoat	60 min.	45 min.	30 min.
Light Foot Traffic	12 hrs	8 hrs	6 hrs
Heavy Foot Traffic	32 hrs	24 hrs	18 hrs
Parked Vehicles	48 hrs	32 hrs	24 hrs

CURED COATING PROPERTIES (DRY FILM):

PROPERTY	TEST METHOD	RESULTS
Color (liquid)		White in liquid state
Weight per gallon		9 lbs
Flash Point		>200°F
VOC's	ASTM D3960	Zero (0) g/L

APPROXIMATE COVERAGE (DRY FILM):

Varies depending on application method, profile & substrate absorbency.
100 to 400 square feet per gallon

LIMITATIONS:

- AVOID applying Smith's Water Shield over a damp substrate
- AVOID PUDDLING during application – use a soft bristle nylon push broom to work into surrounding areas
- NOT RECOMMENDED OVER DENSE / SMOOTH SURFACES to included polished surfaces, densified concrete, burnished concrete, etc.
- DO NOT APPLY over previously sealed / painted / coated substrates
- NOT FOR USE with topical concrete stains nor Polymer Modified Cement-based products

NECESSARY TOOLS and EQUIPMENT:

- Sprayer
- Painters Tape or Stucco Tape for masking
- Plastic drop cloth
- Exploded tip, soft bristle Nylon Push Broom
- Cleaning Solvent (Use dish soap & water while wet to clean tools)

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INSPECT THE SUBSTRATE: Ensure the substrate is structurally sound and solid as well as free of any contaminants that may inhibit penetration, such as oil, paint, densifier / sealers, curing compounds, wax, silicone, etc.

TEMPERATURE & HUMIDITY: Substrate temperature materials must be maintained between 45°F (7.2°C) to 100°F (37.7°C) with less than 80% Humidity during application. Substrate surface temperature must remain above 45°F (7.2°C) for at least 8 hours after installation. *Do not install when the Dew point is within 5° of the temperature.*

CHECK FOR MOISTURE: Exterior concrete must be visibly dry at time of sealing. No water exposure for a minimum of 8 hours at 72°F (22.2°C) or 16 hours at 45°F (7.2°C).

NEW CONCRETE: Ensure the bleed water has escaped new concrete surfaces and has cured for a minimum of 28 days to achieve the intended design strength prior to preparation.

CONTAMINATION OF SUBSTRATE: Determine if a potential contaminant exists (oils, chemical from spills, etc.) and a proper course of remediation. Follow local regulations regarding contaminant and waste disposal.

OIL CONTAMINATION: Use [Smith's Oil Clean](#) to remove oils, (i.e. petroleum, synthetic and food oils) from the surface of the concrete prior to traditional substrate preparation stated below.

SUBSTRATE PREPARATION: Surface preparation should be viewed as the most important step in a successful application. Proper substrate preparation results in the product's longevity, minimizes potential failures and creates the best environment for installation. In short, the more detail and time allotted to this phase of the project will dramatically affect appearance and durability of the finished project.

EXTERIOR PREPARATION:

- 1) Remove paint, adhesives and loose particles from the intended application surface
- 2) Liberally apply [Smith's Green Clean Pro](#) to a 20 ft. by 20 ft. section of the substrate or smaller with a pump up sprayer or dip and roll method with a ½ inch nap roller cover
 - a) Wet the intended treatment area with water in hot weather application or direct sun exposure
- 3) Allow [Smith's Green Clean Pro](#) to dwell on the substrate for 20 to 30 minutes occasionally agitating with a deck brush or a nylon brush attached to a low speed orbital floor buffer
 - a) Do NOT Allow [Smith's Green Clean Pro](#) to dry on the substrate
 - b) Mist water via hose or pump up spray to keep treated area from drying
- 4) Pressure Wash to rinse utilizing 12,000 work units* pressure washer in conjunction with a Zero (0) degree rotating nozzle tip to remove the [Smith's Green Clean Pro](#) with overlapping line patterns
- 5) Allow surface to dry
- 6) 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 directions.

INTERIOR SURFACE PREPARATION - Diamond Grinding:

- 1) 1st Pass = Use 40 grit metal bond diamonds (or comparable) if the surface requires removal of surface irregularities or adhesive residues
- 2) 2nd Pass = Use 80 to 150 grit metal bond diamonds (or comparable) to remove the scratch marks / swirls from the initial grinding cut. Do NOT use Resin Bond diamonds for preparation due to resin residue transference
 - a) Check for absorption by pouring water on the clean, diamond ground surface to ensure water readily absorbs into the concrete without beading up within 1 minute
 - b) Should water not readily absorb, step down in diamond grit until achieved (i.e. starting at 150 grit and working down as necessary to 80 grit)

DRY GRINDING:

- 3) Remove excess dust with vacuum
- 4) Dust mop using a microfiber pad to remove fine dust and particles
 - a) Replace micro-fiber mop head once dirty with a fresh / clean-up micro fiber mop head
 - b) 3 to 4 passes are necessary to remove residual fine dust particles
- 5) Use an auto-scrubber (large areas) equipped with soft bristle disk nylon brush heads while rinsing with clean water
 - a) Extract material by lowering the squeegee uptake bar on the auto-scrubber
 - b) Continue to flush and agitate the substrate until the rinse water is clear

WET GRINDING:

- 3) Extract slurry with wet vacuum
- 4) Use an auto-scrubber (large areas) equipped with soft bristle disk nylon brush heads while rinsing with clean water
 - a. Extract material by lowering the squeegee uptake bar on the auto-scrubber
 - b. Continue to flush and agitate the substrate until the rinse water is clear
- 5) Allow surface to dry then perform a "Tape Test"

TAPE TEST: After the substrate has thoroughly scrubbed, rinsed and allowed to dry; apply several 12 to 18 inch long strips of a high quality 2 inch wide clear packaging tape or clear "Gorilla Tape" to various locations on the intended application substrate to determine the cleaning process effectiveness. Aggressively press the tape onto the substrate using the palm of your hand ensuring a vast majority of the air has been removed from beneath the tape. Fold one end of the tape into itself then vigorously pull up on the tape to remove from the substrate. Examine the adhesive side using a bright light to inspect for residue and particulate. Little to no dust or foreign particles should be visible. Areas with visible foreign particulate will need to be rinsed again until the surface is free of contaminants.

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CRACKS & REPAIRS: Surface defects larger than a hairline crack should be filled appropriately prior to sealing.

STONE & PAVER SUBSTRATES: Surface must be dry and free of dust, dirt, efflorescence, oil, grease, sealers / curing compounds / coatings, etc. which may inhibit penetration of Smith's Water Shield.

Always perform a test area on the intended substrate to product viability and appearance prior to proceeding with the project.

APPLICATION: Smith's Water Shield may be spray applied using an HVLP, pump up or airless sprayer. A brush or roller may be used for cutting in the perimeter, edges and hard to reach areas.



Spray apply Smith's Water Shield as a fine mist evenly over the intended surface and allow to soak into the surface **WITHOUT PUDDLING THE SEALER**. Use a clean, soft bristle exploded tip nylon push broom to work any puddles into the surface of the surrounding area. Only apply enough sealer to dampen the surface. Once the substrate returns to its original color, light foot traffic may resume.

NOTE: DO NOT EXPOSE TO WATER FOR MINIMUM OF 8 HOURS AFTER INITIAL APPLICATION

COVERAGE: Smith's Water Shield may be applied between 100 to 400 sq.ft. per gallon per coat depending on the texture, application method and absorbency of the substrate.

RECOATING: Two coats are recommended to ensure full saturation and proper water repellency. A "wet on wet" application of Smith's Water Shield allowing the first coat to saturate into the substrate for up to 1 hour, depending temperature and conditions at the time of applications.

WATER REPELLENCY: Optimal curing condition is 73°F with 50% Ambient Humidity and airflow. Maximum water repellency is achieved within 72 hours under these conditions. Beading generally improves with additional cure time.

CLEAN UP: Clean tools and equipment with dish detergent and cool, potable tap water then thoroughly rinse with water. Once Smith's Water Shield has dried, it may be removed from tools and equipment using Acetone, Xylene, Toluene or MEK.



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