



Product Data Sheet

AQUA-SILS REPELLANT S

Clear, Natural Appearance,
Silane-modified Siloxane,
Water-based Penetrating Sealer

AS-PDS-062223

DESCRIPTION: Water-based, silane-modified siloxane penetrating sealer which develops a mechanical and chemical bond to a variety of mineral based substrates. Yields water repellency, helps protect the surface against freeze/thaw damage from moisture and salt as well as efflorescence, reduce cracking, chemical degradation, biological growth, efflorescence and dirt pickup without darkening nor enhancing the color of the substrate.

RECOMMENDED SEALER FOR PREVIOUSLY UNSEALED:

- Porous Masonry & Mineral Based Substrates such as:
 - Brick
 - Concrete (>28 days old)
 - Saltillo Tile (Clay)
 - Natural Stone (absorbent not polished)
 - Limestone
 - Slate
 - Marble
 - Granite
 - Concrete Block
 - Pavers
 - Stucco
 - Sandstone
 - Travertine
 - Pennsylvania Bluestone
 - Flagstone

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

HIGHLIGHTS:

- Extends substrate life cycle
- Reduce maintenance costs
- Early water beading action
- Stable in high pH applications
- Breathable
 - Repels liquids while allowing excellent vapor emission
- User Friendly
- Low VOC
- Protects substrates against chloride attack from deicer and marine exposure environments:
 - Concrete marine launching ramps
 - Loading docks
 - Self-service vehicle wash bays
 - Road median barriers
 - Concrete walkways such as:
 - Handicap ramps
 - Sidewalks
 - Steps
 - Crosswalks
 - Exterior Common Areas
 - Crosswalks
- Freeze / Thaw Stable
- Does not darken natural color of substrate after fully cured
- 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
- SPS-105-DRUM 55 gallon drum

CURE TIMES (@ 50% Relative Humidity):

**Temperature & humidity affect cure rate*

	60°F	72°F	85°F
Working Time	20 min.	15 min.	8 min.
Recoat	60 min.	45 min.	30 min.
Light Foot Traffic	6 hrs.	4 hrs.	3 hrs.
Full Traffic	8 hrs.	5 hrs.	4 hrs.
Initial Water Exposure	12 hrs.	10 hrs.	8 hrs.
Heavy Rain / Lawn Sprinkler Exposure	24 hrs.	20 hrs.	18 hrs.

CURED COATING PROPERTIES (DRY FILM):

PROPERTY	TEST METHOD	RESULTS
Color - Liquid state - Dry, fully cured substrate		- Whitish liquid - Transparent with no color enhancement / darkening
Solids Content (by volume)		10% to 12% solids
Weight per gallon		9 lbs.
Water Repellency to Wind Driven Rain <i>(Simulated 60 mph wind driven rain)</i>	ASTM E-514	<0.1 mL/min. - PASS
Water Penetration of Concrete <i>(Treated exterior concrete surface)</i>	DIN 4117	<0.1 mL/min. - PASS
Water Stream – CMU	NCMA CMU-WRI-09	Not Absorbed (3 min.) – PASS (vs. 100% absorbed untreated)
Water Droplet – CMU	NCMA CMU-WRI-09	Not Absorbed (1 hour) - PASS (vs. 100% absorbed untreated within 5 minutes)
VOC's	ASTM D3960	67.4 g/L

APPROXIMATE COVERAGE (DRY FILM):

Varies depending on application method, profile & substrate absorbency.
100 to 250 square feet per gallon

NECESSARY TOOLS and EQUIPMENT:

- Sprayer
- Vinyl Stucco Tape for masking
- Plastic drop cloth
- Exploded tip, soft bristle Nylon Push Broom



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LIMITATIONS:

- AVOID applying Smith's Aqua-Sil S over a damp substrate
- AVOID PUDDLING during application – use a soft bristle nylon push broom to work into surrounding areas
- NOT water submersible
- NOT RECOMMENDED OVER DENSE / SMOOTH SURFACES, Do NOT apply over:
 - Smooth finished, burnished, densified or polished concrete, etc.
- DO NOT USE over:
 - Topical concrete stains nor Polymer Modified Cement-based products
 - Previously sealed / painted / coated substrates
 - Non-porous substrates
- Protect / Cover
 - Aluminum surfaces
 - Shrubs / plants
 - Windows

INSPECT THE SUBSTRATE: Ensure substrate is structurally sound & 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 new concrete has cured for a minimum of 28 days to achieve the intended design strength prior to preparation to avoid damaging the finish of the concrete during preparation.

CONTAMINATION OF SUBSTRATE: Follow local regulations regarding contaminant & waste disposal.

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

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

EXTERIOR PREPARATION:

- 1) Remove paint, adhesive & loose particles from intended application surface
- 2) Wet the substrate with water just prior to applying [Smith's Green Clean Pro](#)
- 3) 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
- 4) 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) Mist water via hose or pump up spray to keep treated area from drying
- 5) Rinse with pressure washer 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
- 6) Allow surface to dry
- 7) Perform a "Tape Test"

* Work Units = Gallons per Minute x PSI

NOTE: If additional profile is desired, repeat above [Smith's Green Clean Pro](#) process.

TAPE TEST: Once substrate has been thoroughly scrubbed, rinsed then 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 to determine 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 to create a tab / handle 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/or 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.

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

APPLICATION: Surface must be dry & free of dust, dirt, efflorescence, oil, grease, sealers / curing compounds / coatings, etc. which may inhibit penetration of Smith's Aqua-Sil S.

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

Spray apply Smith's Aqua-Sil S liberally using an HVLP, pump up or airless sprayer to heavily soak the substrate. A brush or roller may be used for cutting in the perimeter, edges or hard to reach areas. If puddling still exists after 20 to 30 minutes, work in any standing puddles to the surrounding areas using a clean, soft bristle exploded tip nylon push broom to speed up the cure rate & avoid any irregular patterns from the excess sealer puddling once cured. Allow the sealer to cure for 4 to 8 hours depending on temperature for light foot traffic to resume.



NOTE: Do NOT EXPOSE to water for a MINIMUM of 8 hours after initial application.

COVERAGE: Apply Smith's Aqua-Sil S between 100 to 250 sq.ft. per gallon depending on the texture, application method & absorbency of the substrate. Highly absorbent substrates may require additional applications if full water repellency is not achieved after the initial application.

RECOATING HIGHLY ABSORBENT SUBSTRATES: Should a substrate quickly and/or irregularly absorb the sealer, a second "wet on wet" application of Smith's Aqua-Sil S may occur after the first coat saturates into the substrate for up to 1 hour, depending temperature & conditions at the time of applications.

WATER REPELLENCY: Optimal curing condition is 73°F with 50% Ambient Humidity & airflow. Maximum water repellency is achieved within 72 hours under these conditions. Beading generally improves with additional cure time. *See cure table on page 1 for time necessary at

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



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