



DENSIFIER / ADDITIVE BASE BOOST™

Product Data Sheet

BB-PDS-08072026

Stain Additive & Concrete Densifier Blend of Lithium & Potassium Silicates

DESCRIPTION: Smith's Base Boost™ is a water-based Lithium & Potassium blend silicate solution for use as a concrete densifier and/or stain adhesion promoter.

RECOMMENDED USE:

Concrete Densifier – Ready-to-use blend of penetrating additives & reactive silicates applied to densify / harden concrete. Once applied, Smith's Base Boost chemically reacts resulting in crystalline structures that embed within the concrete surface. This treatment increases chemical & abrasion resistance. In addition, Smith's Base Boost is a key component in the Polishing with [Smith's Liquid Dyes™](#) & [Smith's Burnish with Color Floor™](#) system application processes.

Stain Adhesion Promoter – Smith's Base Boost is an additive for use in [Smith's Color Floor™](#) & [Smith's Color Wall™](#) over bare concrete to promote substrate adhesion for base or primary colors as well as increase durability of the stains. [Smith's Color Floor](#) & [Smith's Color Wall](#) stains already achieve superior mechanical adhesion as a result of their modified acrylic carrier, but adding Smith's Base Boost into the Smith's Stain Concentrate produces an additional bond by reacting with the un-hydrated calcium hydroxide found in the concrete substrate.

NOT RECOMMENDED FOR:

- Use over non-concrete substrates, sealers, previous layers of stain, or other film forming layers
 - Only for use over bare concrete surfaces
- Highlight colors or subsequent layers of stain
- Areas previously treated with silicates
- Micro-toppings or polymer modified overlay systems

HIGHLIGHTS:

- Increases Durability of [Smith's Color Floor](#) or [Smith's Color Wall](#) stains as well as polished or burnished concrete
- Densifies Polished or Burnished Concrete
 - Higher performance than traditional Sodium or Potassium Silicate Densifiers
 - Penetrates quickly
 - Better initial hardness
 - Faster & more complete reaction
 - Greater durability
 - Reduces application time & cost
 - Improves Light Reflection when polished
 - Increases Surface Hardness
 - Improves Abrasion Resistance
 - Reduces Dusting
- Easy to use
- Zero VOC's
- Low Odor
- Overnight Deliverable – no Red Label



STORAGE: Indoors between 40°F (4.4°C) to 90°F (32.2°C). Do not store in direct sunlight.

SHELF LIFE:

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

COLOR: Clear, liquid

AVAILABLE SIZES:

1 Gallon Jug • 5 Gallon Pail • *50 Gallon Drum • *250 Gallon Tote

*Non-stock size – Made-to-Order

CURE TIMES AS DENSIFIER (@ 72°F (22.2°C) / 50% Relative Humidity):

Pot-Life	Ready-to-Use
Light Water Exposure	24 hours
Foot Traffic	When visually dry
Heavy Traffic (i.e. Planters, parked vehicles, etc.)	≥1 hour

* Anticipate a longer cure time at cooler application temperatures

**See product data sheets for [Smith's Color Floor](#) or [Smith's Color Wall](#) when used as an adhesion promoter additive. Use stains mixed with Smith's Base Boost adhesion promoter within 14 days

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)	40°F (4.4°C)	40°F (4.4°C)	0%
Max.	95°F (35°C)	100°F (38°C)	95°F (35°C)	90%

*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		10% (± 2%)
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	0 g/L
Flash Point	ASTM D3278	N/A

APPROXIMATE COVERAGE AS A DENSIFIER:

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

Burnished / Ground / Honed / Polished Concrete

PACKAGE SIZE	APPROXIMATE COVERAGE
1 gallon (3.78 L)	400 to 800 sq.ft. (37 to 74 m²)
5 gallons (18.9 L)	2,000 to 4,000 sq.ft. (186 to 372 m²)
50 gallons (189 L)	20,000 to 40,000 sq.ft. (1,858 to 3,716 m²)
250 gallons (945 L)	100,000 to 200,000 sq.ft. (9,290 to 18,580 m²)

See coverage section of [Smith's Color Floor](#) or [Smith's Color Wall](#) when using Smith's Base Boost as an adhesion promoter.



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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.

NECESSARY TOOLS & EQUIPMENT:

- Plastic Sheetting or Ram Board to cover substrate for mix station
- Measuring Cups (for traditional staining with [Smith's Color Floor](#) or [Smith's Color Wall](#))
- Sprayer (e.g. Pump, HVLP, Airless depending on the application)
- Floor buffer or Auto-scrubber with soft bristle nylon brush head (for preparation prior to densifier)
- Paint Stir Sticks
- Vinyl or solvent resistant Masking Tape
- White Rags (for clean-up)
- Microfiber mops
- Auto-scrubber or orbital floor machine
- High speed burnisher with polishing pads (for burnished concrete)
- Soap & Water (For tool clean up)



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

SUBSTRATE PREPARATION: See product data sheet for [Smith's Color Floor](#) or [Smith's Color Wall](#) for surface preparation for traditional concrete staining. The surface preparation phase of "Staining a Concrete Floor" should be viewed as the most important. Proper floor preparation results in the stains longevity, minimizes potential failures & creates the best environment for an aesthetically pleasing work of art. In short, the more detail & time allotted to this phase of the project will dramatically affect the appearance & durability of the finished product.

The surface must be free of all foreign materials that would inhibit the absorption of the combination [Smith's Color Floor](#) or [Smith's Color Wall](#) stain with the Smith's Base Boost. Foreign materials include, but are not limited to grease, dirt, glue, or previous coatings.

Do not acid etch as a cleaning method.

For use as a densifier, ensure substrates are clean, sound, solid, dry, free of bond breakers, curing agents, oil, grease, etc. Oil & grease may be removed using an appropriate enzymatic hydrocarbon cleaner, such as [Smith's Oil Clean](#)™, or similar.

Check several random areas for 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. If not, continue to prepare the substrate until a uniform absorption occurs.

For situations where mechanical grinding occurs, use 50 to 200 grit diamonds to hone the concrete surface prior to using a neutral pH detergent in conjunction with an orbital floor machine or auto-scrubber with soft bristle nylon brush heads to clean the surface then thoroughly clean water rinse then allow to dry prior to performing a tape test.

If acid staining, ensure the stain has been thoroughly neutralized & rinsed before proceeding with densifier application.

Standard Cleaning – 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.

DETERMINING 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.



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ADHESION PROMOTER (Additive in Smith's Color Floor):

Exterior Horizontal Application – Broom finish

- 1) Remove paint, adhesives & loose particulates from the intended application surface
- 2) Liberally apply [Smith's Green Clean Pro](#) to a 10 ft. x 10 ft. section of the substrate using a ½ inch nap roller cover
 - Surface must be kept damp to achieve optimal cleaning
- 3) Using a floor buffer with a Mal-grit brush (smaller areas) or an auto-scrubber with a Mal-grit brush (larger areas), scrub each 10 ft. x 10 ft. portion of the floor thoroughly
- 4) As the scrubbing of each area is completed, wait at least 10 minutes, but not more than 30 minutes, before rinsing
- 5) Rinsing is a very important step in the process
 - Scrub to loosen dirt & concrete slurry particles ensuring complete removal
- 6) 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 scrapper or other metal object over the substrate
 - Extract debris from substrate
 - This step will enhance the longevity & durability of the install
- 7) Clean surface using a power washer* with parallel overlapping line pattern

* 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 beginning application of [Smith's Color Floor](#) with Smith's Base Boost additive

Vertical Exterior Application –

- 1) Remove paint, adhesives & loose particulates from the intended application surface
 - 2) 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
 - 3) Allow [Smith's Green Clean Pro](#) to dwell / remain on the substrate for 20 minutes
 - Ensure the surface remains wet for the entire 20 minutes by misting with water, if necessary
 - 4) Agitate [Smith's Green Clean Pro](#) utilizing a nylon brush while rinsing with clean potable water
 - 5) Open the pores of the surface via power washing*.
 - Use a parallel overlapping line pattern to ensure a properly cleaned surface
- * Power wash = Zero degree rotating nozzle with 12,000 work units
(Work Units = Gallons per Minute x PSI)

- 6) Remove [Smith's Green Clean Pro](#) from the surface using a power washer* with overlapping line patterns
 - Should additional profile be desired, reapply [Smith's Green Clean Pro](#) following the previous directions starting at 2 above
- 7) Allow the area to dry adequately then perform a tape test & absorption test to confirm successful preparation
(See Previous Page for testing description)

Interior application of [Smith's Color Floor](#) with Smith's Base Boost additive as an adhesion promoter will require diamond grinding as [Smith's Green Clean Pro](#) with pressure washing are not appropriate for preparing interior concrete floors.

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

See product data sheet for more information regarding [Smith's Color Floor](#) or [Smith's Color Wall](#) (click for hyperlink).

DENSIFIER APPLICATION: Smith's Base Boost may be applied via pump sprayer, then spread evenly using a microfiber mop.

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 are viable options for application of this product.

Spray on in single coat that sufficiently & evenly wets the substrate without creating puddles then work into the surface using a microfiber mop while wet (see below methods).

- 1) Apply Smith's Base Boost onto intended application area with a pump up spray utilizing circular motion
- 2) Distribute material evenly with a soft bristle push broom or microfiber pad
- 3) Re-apply material as needed in areas where initial application has absorbed. Material should be applied until substrate is no longer absorbent
 - Avoid puddling in low areas. If puddles occur, work into the surface of the surrounding areas using a microfiber mop until no excess product remains
 - Older slabs or very porous substrates may require additional coats of Smith's Base Boost to ensure the substrate achieves full saturation
- 4) Continue to manipulate applied material with push broom or microfiber pad for 15 to 20 minutes
 - Do not wait for this product to begin to dry before spreading with microfiber
 - If the surface begins to dry in less than 10 minutes, apply more Smith's Base Boost & adjust application speed to ensure full saturation occurs
- 5) Allow product to dry before polishing and/or burnishing
- 6) Once dry, remove any dry residue with an auto-scrubber, broom or floor machine
- 7) To increase sheen
 - For burnished concrete, buff using a high speed floor burnisher with an appropriate dry polishing pad
 - For polished concrete, continue mechanically honing surface with progressively finer grit diamonds until desired finish is attained, cleaning off any dust & debris between each progressive step up

Refer to [Smith's Liquid Dye](#) application instructions for polishing procedure and/or [Smith's Burnish with Color Floor system](#) for best practices.

SUBSTRATE SURFACE TEMPERATURE (as a densifier):

	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)	40°F (4.4°C)	40°F (4.4°C)	0%
Max.	95°F (35°C)	95°F (35°C)	95°F (35°C)	90%

*Avoid application within ±5° of Dew Point Temperature

** Do not apply sealer when substrate has direct sun (high noon) or if the surface temperature exceeds 95°F (35°C)

PROTECTIVE GUARD FOR POLISHED / BURNISHED CONCRETE:

For additional durability, protection & sheen, [Smith's Surface Guard](#) may be applied (Click for more information regarding this product).



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CLEAN UP: Immediately clean-up work area & tools with soap & water while still wet. Aluminum, Glass & other surfaces should be thoroughly rinsed with water immediately.



CURE RATE – Densifier: Smith's Base Boost will achieve full cure properties, to include water resistance, surface hardness & sheen, over one week (7 days) under typical conditions. See "Cure Rate as Densifier" section on page 1, top right column for more cure related information.

MAINTENANCE: *Allow to cure for no less than one week (7 days) before using any mechanical cleaning equipment on the surface & no less than 24 hours before neutral pH detergent cleaner or water exposure. This includes auto-scrubbers, swing buffers, sweepers, etc. Only dust & wet mop the first week. See product data sheet for recommended cure time necessary prior to mechanical cleaning via floor machines.*

Cleaning & Maintenance of Industrial Floors

Regular cleaning, to include dust mopping, is crucial to maintain the appearance & to achieve the appropriate longevity of any floor coating system. Cleaning cannot occur too often. Spills should be removed quickly. Avoid the use of Polypropylene or abrasive bristle (Tynex®) brushes as these are known to create scratch patterns & lower the sheen of the surface.

Proper maintenance will help to maximize your investment by removing particles that scratch & dull the appearance of a floor surface. The floor should be swept daily & scrubbed once per week or per month depending on the amount & type of soils present. Environments with oils will require a stricter cleaning regiment.

DETERGENT: Always use the least aggressive detergent necessary to remove the residue. Typically, floors may only need a detergent scrub on a weekly or monthly basis depending on the environment. Daily dust mopping or water only mopping / scrubbing is highly recommended. Environments with exposure to foods, oils, chemicals, ink, etc. should be detergent scrubbed daily, possibly enough after every shift.

Caution: Do not drag or drop heavy objects across any floor, including coatings as scratching, gouging or chipping may occur to the concrete or the coating itself. This includes the tip of the forks on a forklift, nails protruding from pallets, etc.

Rubber tires are prone to plasticizer migration staining, especially aviation tires & high performance car tires. Plasticizer will stain polished concrete, sealers, coatings & commercial flooring leaving an amber, yellow-like stain that can be permanent. This can be more noticeable where aircraft or vehicles are stationary for longer period of time, more so in non-climate controlled environments such as aircraft hangars with lighter colored floors. To avoid plasticizer staining, use a piece of Plexiglas® or LEXAN® panels, cut a few inches in diameter larger than the tires that will rest on the panels, between the floor & the contact point of the tire when storing rubber tired vehicles on any floor, including floor coating systems.

Avoid spinning tires on the surface of a floor. The heat created from the friction of a spinning tire will quickly cause permanent damage.

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LIMITED LIABILITY: Liability is limited to replacement of defectively manufactured product of the same type and cost of the originally 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. Should a product defect be suspected at the time of application, cease use of the product immediately and notify Smith Paint Products for investigation as 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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