



QC EcoSoy System

QC EcoSoy Stain and QC EcoSoy Seal Product Information Bulletin 26.0808P



QC ECOSOY STAIN and QC ECOSOY SEAL

QC ECOSOY STAIN is a patent protected semi-transparent, non-hazardous, soy oil modified concrete stain, free of acid and with an ultra-low VOC. QC ECOSOY STAIN is a durable and sustainable penetrating concrete coloring option.

QC ECOSOY SEAL is a water-based, low VOC, environmentally-friendly acrylic modified soy sealer. It is available in gloss and satin finishes.

QC ECOSOY STAIN and QC ECOSOY SEAL can be used for interior or exterior applications, on virtually any type of hard porous surface, including, but not limited to, gray concrete, colored concrete, stamped concrete, polymer modified overlays, stucco, brick, pavers, mortar, artificial stone, natural porous stone, porous tile, and concrete counter tops.

Uses and Benefits

- QC ECOSOY STAIN uses bio-based soy technology. It is a rapidly renewable resource.
- QC ECOSOY STAIN is green-building LEED compliant and has an ultra-low VOC. It is acid free, non-hazardous and virtually odorless.
- QC ECOSOY STAIN is low cost, quick and easy to install and offers a diverse color palette for unlimited designs.
- QC ECOSOY STAIN is mildew-resistant, UV-resistant, efflorescence-resistant, stain-resistant, water-resistant and will not peel, chip or flake.
- QC ECOSOY STAIN is UV stable and can be used on both interior and exterior surfaces including: concrete floors, overlays, masonry walls, natural stone, landscapes, hardscapes, pool decks, patios, garage floors, tilt-up walls, plaster walls, adobe, stucco, drywall, concrete art, etc.
- QC ECOSOY STAIN requires no neutralization or residue cleanup, and offers a fast turnaround time.
- QC ECOSOY STAIN is available in 15 standard colors.
- QC ECOSOY STAIN is a true penetrating stain creating natural color variations and marbling depending on the surface it is applied to and how it is applied.

Before Any Application

■ Concrete will vary greatly by cement mix type, aggregates, filler, hardeners, cure & seal compounds, density, strength, and concrete finishing methods. These variables may produce inconsistencies in porosity, texture, and color even within the same slab pour. These inconsistencies also provide the unique and natural variegated look when installing semi-transparent stains. The most important steps to ensure the desired decorative stain results are to properly test for porosity and color. If you have a hard troweled surface that is very dense or will not exhibit fast penetration of water, you must profile the surface by opening the pores to allow sufficient penetration of the stain. The color of your concrete and the admix used, will affect the actual color. White or lighter color concrete will produce a more true color as seen in sample color charts. Dark gray or colored concrete will produce varied results depending on the desired color pigment. Field adjustments can be made with QC ECOSOY STAIN by mixing different stain colors or applying multiple coats. Porosity will also affect color. The more porous surfaces will tend to be darker than less porous surfaces. Good porosity does not necessarily mean a rough, broom or aggregate exposed finish. The finish may be smooth as glass and still have excellent porosity. The density of the finish or additives used during the curing process will have a greater impact on less than acceptable porosity.

■ Proper surface preparation is critical to a successful long term and beautiful installation. Surfaces must be porous for proper penetration. Test the surface in all areas within each pad or foundation sections for porosity by spraying a light water mist over the project area. If the water soaks in fast and easy in all areas, you should have sufficient porosity and are ready to perform your stain sample test area. If your water test beads on top of the surface or penetrates very slowly, you either have a non-porous hard troweled surface or you may have oil, sealer, cure-n-seal, hardener or other substance that is prohibiting penetration. If all sealers and residues have been thoroughly removed, you may open the pores of the surface by sanding, grinding, shot blasting and/or by using QC CON-CLEAN* for maximum penetration and desired results. If the concrete is very dense or contain hardeners, using a mechanical grinding method still may not open the pores to create sufficient porosity. In these cases, using QC CON-CLEAN* in conjunction with grinding may be necessary.

■ **Degreasing:** We recommend degreasing with QC CONCRETE DEGREASER AND NEUTRALIZER* to remove all oils, residues, and contaminants from the surface. Apply liberally at 10:1 heavy duty, 15:1 medium duty or 20:1 light duty. Power wash clean or apply and rinse by hard bristle brush or floor machine with a black stripping pad. Use a wet/dry vac to extract the solution and allow to dry.

■ **Stripping:** We recommend QC SEAL STRIP* to remove any paint, coating, waxes, or sealers that may prohibit penetration or that you do not wish to show through the stain. Apply liberally with a HD pump sprayer or by roller and allow to dwell for 5 minutes to 12 hours depending on the age, type, and thickness of coating material. Always test a small area to establish the most effective dwell time prior to full application. For large area applications most will find it convenient to apply and allow to dwell overnight. Remove by power washer, floor scraper, or squeegee as applicable. Degrease area well as described in above.

■ **Chemical Etch:** For chemical etching method, we recommend using QC CON-CLEAN* at a minimum dilution of 10 parts water to 1 part QC CON-CLEAN*. For denser surfaces a lower dilution rate might be needed. It will effectively open pores of most hard troweled, non-porous concrete. Apply liberally by sprayer. Allow to dwell for 15 minutes, and then reagitae with roller and allow to dwell for another 15 to 30 minutes. Test a small area to establish optimum dwell time and desired porosity prior to full application. Degrease area well with QC CONCRETE DEGREASER AND NEUTRALIZER*.

■ **Overlay or Micro-Topping:** QC THIN-PAVE, QC CONCRETE RESURFACER, and QC CONCRETE RESURFACER HD. Overlays or Micro-Toppings are also a very popular method to repair or create a consistent and basically new concrete canvas in which to stain. This solution is best performed by an experienced installer or an experience DIY installer familiar with trowel applications. QC ECOSOY STAIN can be used to stain QC THIN-PAVE, QC CONCRETE RESURFACER HD, and QC CONCRETE RESURFACER.

■ If applying to new unsealed porous concrete surface, it is recommended to allow for proper curing which is typically 21-30 days. (Consult with your concrete contractor). Always test a small area prior to full installation. Approximate spread rate of QC ECOSOY STAIN is between 400-600 square foot per gallon depending on the application method and porosity of the substrate. Ensure that the surface temperature is above 50 °F for best drying and curing conditions.

■ After you have performed your initial porosity test and surface preparation steps, test a small area for color and porosity prior to full project installation. This small test will save you time and effort if you find that color modification or additional porosity is required. Apply your stain, test by using a sponge or stain trim pad and rub into the surface until all marks and surface material is clearly spread within the concrete surface. Do not allow puddling or topical stain to remain on the surface. Allow the stain to dry for at least 30 minutes. Use a small fan to help accelerate the dry time for better visual evaluation.

■ After the dry time, wipe the stain with a lint free cloth or your fingers. If the stain comes up easily and exposes the concrete, there was no penetration. Additional surface preparation may be necessary. If very little or no stain residue came up, you may proceed with your application. After 12 to 24 hours, you should not be able to remove the stain, even when you scrub with a stripping pad.

QC EcoSoy Stain Application

1. Mixing instructions based on 1 gallon system: Begin mixing the 1 gallon QC ECOSOY STAIN CLEAR BASE by emptying the entire contents into a clean plastic bucket. Empty the contents of the 16 oz container of QC ECOSOY STAIN LIQUID TINT PACK into the same bucket. Fill the empty tint pack container with clean water, shake to fully mix any remaining color and pour the contents into the bucket. Mix well with a mechanical mixer or jiffy mixer for 1 minute. Assure that the QC ECOSOY STAIN LIQUID TINT PACK is thoroughly and uniformly mixed into the QC ECOSOY STAIN CLEAR BASE. At this time the QC ECOSOY STAIN is now activated and ready to use. If further dilution is required due to porosity of the substrate being stained, you may add up to 6 more containers of clean water, not to exceed 2 gallons in total content. **Application:** Mask areas not intended to be stained. If applying advanced design patterns or stenciling, measure and mark pattern design placement with applicable tape or chalk lines. Avoid puddling or the temptation to hide the surface like paint. If applying multiple color topcoats, allow the first coat to dry approximately 30 minutes to 1 hour, and then apply topcoat as desired. QC ECOSOY STAIN must be applied in a very thin even coat. You must work the product into the surface when using a manual application method. When dealing with multiple coats, always be aware of the porosity limitations.

Mixing ratio for 5 gallon system: 5 gallon container of clear base, 1 gallon container of Liquid Tint, 1 gallon of clean water to rinse residual color. Add up to 3 gallons of water to dilute further dependant upon the porosity of the surface, not to exceed 10 gallons in total content.

2. Sprayer Application: Use a good quality pump up sprayer. Set to a fine spray. When spray applying, dilute QC ECOSOY STAIN 20% - 50% with clean water. Apply in a thin even pattern and avoid puddling. If puddling or spotting occurs, rub the stain puddles into the surface using a micro fiber pad applicator or frayed end RENEW BY QC applicator brush. You may also use a floor buffer with medium pad after about 20 minutes of application as a design tool and to enhance distribution or manipulation of the stain. To help loosen the applied stain, simply spray lightly with water as you move the floor machine over the area.

3. Manual Applicator: Use a frayed end RENEW BY QC applicator brush. Pour QC ECOSOY STAIN in a large 18" paint tray and saturate brush evenly. When brush applying, QC ECOSOY STAIN can be applied full strength or diluted 10% to 20%. Apply QC ECOSOY STAIN moving from left to right or right to left in 3' passes. Work the stain into the surface evenly and as far as the stain will spread. Pass over all areas to further spread and move any topical or puddle stain while working the stain into the concrete surface. Work out any lap marks by continually working the topical stain into the surface. If the stain has dried too much, you may simply spray the area lightly with water and rub stain into the surface.

4. If you require a darker color contrast, build up to your desired color with thin coats. Allow 30 minutes to 1 hour between coats to observe actual color prior to applying additional coats. When using a floor buffer as noted above, you may apply your next coat immediately after buffing and repeat the process. When applying different colors that you do not want blended into the base coat, you must closely observe full dryness of the base coat prior to applying secondary colors.

5. Dry Time: QC ECOSOY STAIN will dry in 30 minutes to 24 hours depending on surface porosity and environmental conditions. Use a damp rag to test the surface and assure that very little to no residue can be pulled from the surface. Once dry, seal with QC ECOSOY SEAL or other QC sealer system. A minimum of 6 hours dry time is required before sealing.

QC EcoSoy Seal (gloss and satin) Application

1. Apply after the recommended dry time of QC ECOSOY STAIN. The sealer application is required to provide a lock-in protective barrier that protects your concrete surface and provides a lock-in barrier against moisture, staining, dusting and efflorescence. Most applications will require only a single coat. It is recommended to install a minimum of 2 coats for automotive and high traffic areas for maximum protection. Allow approximately 1 hour intercoat dry time between sealer coats.

2. QC ECOSOY SEAL is best applied with a Padco Micro fiber Applicator or Padco Heavyweight T Bar Applicator (www.padco.com). A 3/8 inch nap roller can be used, talking care to maintain a wet edge to avoid lap lines. Pour QC ECOSOY SEAL into an applicable paint tray or directly onto the surface. Apply in 3' wide passes in a thin even coat to ensure elimination of puddling. Allow QC ECOSOY SEAL to dry for approximately 12 hours prior to allowing light foot traffic. Allow approximately 5-7 days prior to vehicular traffic to avoid hot tire pick-up. A fully cured system is hot tire pick-up resistant suitable for vehicular traffic. Full curing of the installation is approximately 5-7 days depending on environmental conditions. Avoid accumulation of standing water or washing with chemical detergents during the curing period.

Surface Protection and Maintenance

■ QC ECOSOY SEAL is the recommended sealer for the QC ECOSOY STAIN system.

■ QC ECOSOY SEAL is an acrylic modified soy sealer that will ensure the long lasting protection and enhance the color of the final project.

■ For interior applications, the system consist of two coats of QC ECOSOY SEAL, (gloss or satin) followed by three coats of either QC INTERIOR FLOOR FINISH* gloss or QC NATURAL BEAUTY* matte. The following QC sealers can be used in place of, or on top of QC ECOSOY SEAL if desired: QC CEMSEAL*, QC PERMASEAL*, QC VOC 100 WB*.

■ Regular cleaning with QC FLOOR CLEANER* is recommended. The application surface should be inspected periodically for thin or traffic-worn areas. Reapply product as needed with a maintenance application.

■ All decorative concrete installations should be maintained on a routine basis with the use of QC maintenance products to ensure the preservation of a high-quality, long-lasting surface. Maintenance schedules will vary depending on a number of factors, including volume and intensity of traffic, ultraviolet light exposure, geographical location and weather conditions. Stained surfaces should be routinely swept and damp-mopped of dirt/loose debris to avoid unnecessary wear to the surface. The use of floor mats at all entrances and exits is highly recommended. Resealing will be required periodically, depending on the amount of foot traffic. As with any other surface treatment, the lifetime of this product is dependent on the care it is given. The use of a qualified flooring maintenance contractor is recommended for resealing, especially in commercial applications.

Limitations

■ QC ECOSOY STAIN is a semi-transparent concrete stain that will provide a variegated, semi-translucent appearance. The final color and the level of translucence will vary depending on the varying conditions of the concrete to which it is applied. The color chart is intended to provide a general representation of the final color and is not intended to be an exact representation of the final color. We strongly recommend that a sample be applied and reviewed for color and degree of translucence prior to any broader application of QC ECOSOY STAIN.

■ QC ECOSOY STAIN is a penetrating stain. Proper surface preparation to allow for proper penetration is key to successful color development and stain longevity. If the surface is not properly "open" or porous to allow proper penetration, the stain will be easily removed resulting in failure of the stain and sealer system.

■ High humidity or cool temperatures will slow the dry times for both QC ECOSOY STAIN and QC ECOSOY SEAL.

■ Assure QC ECOSOY STAIN is thoroughly dry before applying QC ECOSOY SEAL. QC ECOSOY SEAL will not bond properly if QC ECOSOY STAIN is still wet, or the surface is not thoroughly dry. Surface temperature, air temperature, and humidity can all slow the dry times.

■ Surface temperature must be above 50 °F and rising or below 90 °F. Avoid application in direct hot sunlight, windy conditions, or high air temperatures.

Coverage Rates and Drying Times

Coverage rates may vary depending on the texture, porosity and condition of the concrete, application method, and other local conditions. Drying times will vary depending on surface permeability, temperature, humidity and local conditions. Drying time may vary between 30 mins- 24 hours.

■ QC ECOSOY STAIN coverage rate is 400-600 square feet per gallon.

QC ECOSOY STAIN will generally dry to the touch within 1 hour depending on environmental conditions. Colder climates and high humidity will prolong drying times. Hot or sunny outdoor exposure will accelerate drying. When applying additional coats or color, be sure to wear spikes, socks or protective shoe covers to avoid marks or contamination of the stain coat. Apply additional coat as desired. Apply recoats as soon as possible after initial coats. Recoats may be applied at later times, but final color may vary. Test any recoat in a small area prior to full application.

■ Set to touch – 1 hour ■ Light foot traffic – 12-24 hours

■ Dry to seal – 4-6 hours ■ Full cure – 5-7 days

■ QC ECOSOY SEAL coverage rate is 300-400 square feet per gallon.

QC ECOSOY STAIN requires approximately 6 hours drying prior to applying QC ECOSOY SEAL. Premature application of the sealer may loosen QC ECOSOY STAIN that has not fully penetrated into the surface. You may expedite the drying time and also effectively even the QC ECOSOY STAIN installation by buffing the stain application. Buff with a medium coarse (blue, red or brown pad) after approximately 20 minutes of the stain application. Test a small area prior to full buffing to ensure QC ECOSOY STAIN has penetrated sufficiently. This buffing method will enhance the penetration and drying time significantly. QC ECOSOY SEAL application may be applied as soon as 5 hours after the buffing process. If your installation has multiple colors or design patterns, be extra cautious if using the buffing process as premature buffing of multiple topcoat colors may tend to bleed colors together. For such detailed design installations, we generally would recommend the natural 6- hour drying process.

■ Set to touch – 30 minutes - 1 hour ■ Hot tire resistant – 7 days

■ Light foot traffic – 12-24 hours ■ Full cure – 5-7 days

Package Sizes

QC ECOSOY STAIN is available in:

Pre- blended 2 oz samples (ready to use)

1 gallon system – 1 gallon clear base and 16 ounce liquid color tint pack (sold separately)

5 gallon system – 5 gallon clear base and 1 gallon liquid color tint pack (sold separately)

QC ECOSOY SEAL Gloss and Satin is available in 1-, 5-, 55-gallon units.

Applicable Standards

■ LEEDs Qualification Categories

MR 6 Rapidly Renewable Resource 1 point

EQ 4.1 Low Emitting materials – Adhesives and Sealants 1 point

Technical Data

Please refer to corresponding-color MSDS for hazard-related information.

Physical Liquid

Odor Mild

Solids percentage 20%

VOC <25g/L

Shelf Life and Storage

QC ECOSOY STAIN and QC ECOSOY SEAL have a shelf life of one year. Store product indoors and away from heat or direct sunlight. Do not store below 40 °F and do not allow product to freeze. Pre-blended or tinted stain has a shelf life of 6 months.

Product Handling

For complete instructions on handling and use, consult the corresponding Material Safety Data Sheet before using product.

Warranty

QC ECOSOY SYSTEM PRODUCTS are warranted to be of uniform quality within manufacturing tolerances. Since control is not exercised over its use, no warranty, expressed or implied, is made as to the effects of such use. Seller's and manufacturer's obligation under this warranty shall be limited to refunding the purchase price of that portion of the material proven to be defective. The user assumes all other risks and liabilities resulting from use of this product. If you have any questions, please contact QC CONSTRUCTION PRODUCTS.

***PLEASE REFER TO THE QC WEBSITE FOR THE CORRESPONDING PRODUCT INFORMATION BULLETIN CONTAINING TECHNICAL AND APPLICATION DATA.**

www.qcconstructionproducts.com

For complete information on all QC products—including product information catalogs, product brochures, color charts, technical specifications, sales aids and more—contact QC CONSTRUCTION PRODUCTS.

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