



QC Concrete Dye

Product Information Bulletin 33.0507P

QC CONCRETE DYE is a translucent, micronized, chemically inert and non-reactive organic pigment. When applied to overlays, profiled or polished concrete, will provide intense coloring effects without creating a film or coating that can be worn away. QC CONCRETE DYE is available in 16 standard colors.

Uses and Benefits

- **QC CONCRETE DYE is for use in interior applications only.**
- QC CONCRETE DYE deeply penetrates and resides in the microscopic voids and substrate structure of properly prepared concrete and overlay surfaces.
- QC CONCRETE DYE is a viable alternative to traditional reactive stains, such as QC PATINA STAIN*, when a larger color palette or ease of installation is required. QC CONCRETE DYE is also ideal for polished concrete due to its depth of penetration.
- QC CONCRETE DYE can be utilized in conjunction with all QC Systems as a coloration tool in the production of concrete flooring and pre-cast elements provided that the installation will not be subject to UV Light exposure.
- QC CONCRETE DYE is manufactured as a ready-to-use product both in water-based (WB) and solvent-based (SB) formulations. Both products can be diluted in the field with multiple types of liquid to yield a range of color effects. These liquids include, but are not limited to, water, acetone, xylene, isopropyl alcohol and mineral spirits.
- QC CONCRETE DYE can be diluted to achieve a broad spectrum of colors.

Before Any Application

■ QC CONSTRUCTION PRODUCTS utilizes the International Concrete Repair Institute (ICRI) Concrete Surface Profile (CSP) standards for specifying finished surface roughness prior to applying QC CONCRETE DYE. For proper adhesion, the concrete must be a minimum #1 according to the ICRI CSP chart. Contact the ICRI at www.ICRI.org or QC CONSTRUCTION PRODUCTS for more information on these surface profiles.

Application to Concrete and Polished Concrete

1. Always complete a jobsite sample.
2. A correct surface pH (7-9) is critical before applying QC CONCRETE DYE or any other coloration product and sealer. QC pH PENCILS and test kits are available through QC CONSTRUCTION PRODUCTS.
3. QC CONCRETE DYE is best applied with an airless backpack pump-up sprayer or good quality solvent-resistant sprayer.
4. Protect all adjacent surfaces from overspray, as QC CONCRETE DYE will discolor any porous substrate. **Note:** QC CONCRETE DYE will bleed dramatically compared to other staining products. For example, the use of duct tape applied over blue tape may be required to minimize bleed. To achieve separation between colors at hard lines, the use of saw cuts or stencils will be required. This product will discolor any joint filler.
5. The surface to be colored with QC CONCRETE DYE must be clean and dry. Do not apply QC CONCRETE DYE to damp surfaces, as penetration will be greatly reduced. Optimal results are achieved from a dry grinding and polishing process applied at the 400-grit level and up. For subsequent floor cleanings, an auto scrubber, rather than the use of a technique that will saturate the floor, should be used.
6. Many factors influence the amount of color retention or loss. Generally, QC CONCRETE DYE will be applied at the 400-grit level of polishing with subsequent polishing beginning again at the 800-grit level once product is dry. In some cases, the applicator may wish to use a light application of stain subsequent to the first application at the 800- or even 1500-grit level for maximum color intensity.
7. If a uniform appearance is desired, multiple coats of QC CONCRETE DYE SB will provide the best results. If a more variegated or mottled appearance is desired, multiple coats of QC CONCRETE DYE WB will provide the best results.

8. **To obtain an appearance similar to QC PATINA STAIN***— For best results, layer diluted SB and WB dyes as follows: 1) Apply diluted SB dye; 2) apply WB dye diluted 50/50 with solvent (or greater); and 3) spray out randomly with varying coverage rates. This type of application will result in more product residue than an application of straight diluted acetone.

9. After QC CONCRETE DYE application, subsequent polishing will typically remove any residue that may be reconstituted when applying a stain resist or finish sealer. If wet polishing as opposed to dry polishing greater color loss can be expected. If multiple, separated colors are being incorporated into a floor design, it will be necessary to lightly wash the surface of each color individually with a mop or scrub by hand with a soft to medium bristled broom, being sure to remove ALL residues so that no color contaminates adjacent areas.

10. Once the concrete has dried completely, application of an appropriate stain resist is highly recommended.

Note: An appearance similar to polished and stained concrete (QC PATINA STAIN*) can be achieved by utilizing QC CONCRETE DYE over concrete ground to a “full sand cross section exposure,” stopping at the 150-grit round segment metal bond level and then sealing with acetone-diluted QC ULTRA SEAL*. Unlike polished concrete, this application method will require subsequent floor finishes as part of regular surface maintenance, however, this product and application method is highly durable compared to traditional stained concrete that has not been ground.

Application to Overlays – QC Concrete Resurfacer, QC Concrete Resurfacer HD or QC Thin-Pave NI

1. Always complete a jobsite sample.
2. Protect all adjacent surfaces from overspray, as QC CONCRETE DYE will discolor any porous substrate. For example, the use of duct tape applied over blue tape may be required to minimize bleed. To achieve separation between colors at hard lines, use of saw cuts or stencils will be required.
3. The surface to be colored with QC CONCRETE DYE must be clean and dry. Do not apply QC CONCRETE DYE to damp surfaces, as penetration will be greatly reduced.
 - For QC CONCRETE RESURFACER* OR QC CONCRETE RESURFACER HD*, lightly sand the topping and tack wipe up the dust prior to application of QC CONCRETE DYE.
 - For QC THIN-PAVE NI*, clean the overlay surface thoroughly to remove any residual liquid release. A mildly acidic cleaner, such as QC CON-CLEAN*, can be utilized for this application.
4. QC CONCRETE DYE is manufactured as a ready-to-use product that can be field diluted a minimum of 5 parts acetone or water—considered the base dilution—prior to application. Subsequent dilution can be done from this point. **Note:** Referenced dilutions are based on the use of acetone.
5. If a uniform appearance is desired, then multiple coats of QC CONCRETE DYE diluted with a solvent (such as acetone) will provide the best results. If a more variegated or mottled appearance is desired, then a blend of water and acetone will provide an appearance more characteristic of QC PATINA STAIN*.
 - Flooding a polymer-modified overlay with solvent-diluted QC CONCRETE DYE can soften the overlay. Be sure to sample all applications before proceeding.
 - Layering a 20 or greater acetone dilution over the entire slab to achieve some base color followed by a heavier application of a 50/50 water/acetone blended 10 or greater dilution sprayed out in a random fashion with varying coverage rates will provide good results.
 - This type of application will result in more product residue than will an application of straight diluted acetone.

6. Correct application of QC CONCRETE DYE will result in little to no residue, and the sealing application can begin once the stain is dry. A heavy application of QC CONCRETE DYE may require a water wash. Rinse water will stain adjacent surfaces if allowed to dry. It is not necessary to neutralize QC CONCRETE DYE during the washing process, as it does not leave a dramatically acidic residue.

7. Once the concrete has dried completely, proceed with an application of an appropriate QC Sealer. **Note:** The above guidelines reference various dilutions—the appearance of a QC CONCRETE DYE treated floor is highly dependent upon the application.

Surface Protection and Maintenance

QC CONSTRUCTION PRODUCTS offers a full range of high-end sealer systems for colored and stained surfaces to ensure the long lasting protection and enhanced color of the final project. The interior system consists of two coats with a durable base coat sealer, followed by three coats of a special high-solids top coat maintenance sealer. The exterior system consists of two thin coats of a durable base coat sealer.

Base Coat Sealers:

QC Ultra Seal*
QC Solvent Seal VOC III*
QC Solvent Seal 18*
QC Solvent Seal 27*
QC Surpro SB*

Top Coat Sealers:

QC Cemseal*
QC PermaSeal*
QC Interior Floor Finish* (Gloss)
QC Natural Beauty* (Matte)

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. 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 CONCRETE DYE is NOT for use in exterior applications where surface is subject to UV Light exposure. *Use only for interior applications.*
- Do not use acidic cleaners on treated surfaces.
- Oil, grease, dirt, efflorescence, curing compounds, sealer, coatings, etc., will inhibit penetration into the concrete micro-voids and capillaries.
- Once the substrate has stopped accepting the QC CONCRETE DYE, no additional applications should be made. Dry, powdery pigment residue can begin to occur after over application.
- Do not allow QC CONCRETE DYE to freeze; do not apply QC CONCRETE DYE in freezing temperatures; and do not apply to surfaces with temperatures below 40 °F or when such temperatures can be expected within 4 hours following application.
- Protect surface against air movement or wind during initial application.
- Clean all tools with acetone immediately after use.
- QC CONCRETE DYE will bleed dramatically compared to other staining products.

Coverage Rates and Drying Times

Coverage rates may vary greatly depending on substrate porosity, substrate color and dilution utilized to achieve desired final appearance.

- Material usage approximately 500 square feet per gallon.

Drying times can be dramatically affected by temperature and humidity if diluted with water rather than acetone. Temperature and humidity will dramatically affect the drying times of QC CONCRETE DYE if diluted with water rather than acetone.

- Application must be made to concrete with a temperature higher than 50 °F and maintained at this temperature or above for a minimum of 4 hours after application.
- Typical dry time is 30 seconds to 30 minutes at 70 °F and 50% relative humidity.
- Dry times are also dependent upon the water or solvent carrier ratios.

Shelf Life and Storage

QC CONCRETE DYE has a shelf life of one year.

Store product indoors, away from heat or direct sunlight.

Do not allow product to freeze.

Package Sizes

QC CONCRETE DYE is available in 1-pint, 1-gallon and 5-gallon units.

Applicable Standards

- LEED Qualified (water-based formulation only)

Technical Data

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

Physical Properties: Solvent-Based Formulations

Physical Liquid
Odor Strong solvent smell
Solids after application..... 100%
UV Stability..... 5-10%+ fading to be expected if exposed -
consult QC CONSTRUCTION PRODUCTS
for details.

Physical Properties: Water-Based Formulations

Physical Liquid
Odor Little to none
Solids after application..... 100%
UV Stability..... 5-10%+ fading to be expected if exposed -
consult QC CONSTRUCTION PRODUCTS
for details.

Product Handling

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

Warranty

QC CONCRETE DYE, a proprietary product, is 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 CORRESPONDING PRODUCT INFORMATION BULLETIN FOR 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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