



SCOFIELD® Selectseal-W™

A waterborne, low VOC, clear, acrylic-polyurethane sealer developed for use on multicolored concrete and cementitious surfaces where an environmentally sound product is preferred.

TECH-DATA BULLETIN B-504.03

1. Product Description:

SCOFIELD® Selectseal-W™ is a highly durable, one-component, clear, acrylic-polyurethane sealer for use on new or existing concrete and cementitious toppings to improve resistance to staining, abrasion and the effects of ultraviolet (UV) radiation. Sealed surfaces vary in appearance from matte to semigloss depending on substrate porosity and the number of coats applied.

Specifically developed to protect the beauty of multicolored surfaces, SCOFIELD Selectseal-W is the recommended sealer for use with LITHOCHROME® Tintura™ Stain or LITHOCHROME® Chemstain™ Classic to achieve optimum performance and durability. It is ideal for use over antiqued, imprinted, chemically stained, or exposed-aggregate surfaces. SCOFIELD Selectseal-W may be used on both horizontal and vertical colored or uncolored concrete and cementitious surfaces. SCOFIELD Selectseal-W is formulated for use on interior or exterior concrete and cementitious toppings where a premium-quality, highly durable sealer is desirable.

SCOFIELD Selectseal-W is a low VOC, environmentally sound, green building material. It may contribute to earning LEED® credits for Indoor Environmental Quality, EQc 4: Low-Emitting Materials, based on low contribution of VOC. See the current *Material Safety Data Sheet* for exact VOC documentation.

2. Coverage:

SCOFIELD Selectseal-W must be applied full strength without thinning by airless sprayer or High Volume Low Pressure (HVLP) sprayer. On flat interior floors only, a SCOFIELD® Sealer Applicator may be used. The coverage will vary depending on the method of application and the texture of the surface. Two coats are required on all unsealed horizontal concrete and all horizontal concrete stained with LITHOCHROME Tintura Stain or LITHOCHROME Chemstain Classic. One coat is sufficient on most vertical surfaces.

For application by airless sprayer, High Volume Low Pressure sprayer, or SCOFIELD Sealer Applicator, a coverage rate of 300–500 square feet per gallon (7–12 m²/L) per coat is required.

3. Limitations:

SCOFIELD Selectseal-W is destroyed by freezing. It cannot be restored to a usable condition by thawing and remixing. SCOFIELD Selectseal-W must only be used on concrete that is placed on a well-drained subgrade that is not subject to hydrostatic pressure. Before application of SCOFIELD Selectseal-W, the Moisture Vapor Emission Rate (MVER) of newly placed and older existing concrete or cementitious toppings must be measured and be less than 5 pounds per 1000 square feet per 24 hours (2.5 kg/100 m²/24 hr).

Hand-pump sprayers cannot be used to apply SCOFIELD Selectseal-W uniformly and are not recommended. Application by roller will cause air bubbles to form in the sealer during installation and is not recommended.

Alkali or hard-water deposits may form on or under the sealer at edges, cracks, joints, depressions or other locations where water collects or enters the concrete substrate. Potted plants or other damp objects may leave deposits, stains, or discoloration if allowed to remain on the sealed concrete for an extended period of time.

SCOFIELD Selectseal-W should not be used in areas subject to continuous water submersion or chemical exposure, concentrated abrasion and scratching, or metal-wheeled traffic. On areas subject to forklift traffic, the use of nonmarking tires is recommended to avoid unsightly, black tire marks.

SCOFIELD Selectseal-W must be applied evenly or lap marks and gloss variations will be visible.

SCOFIELD Selectseal-W must be allowed to dry completely, at least 24–48 hours, before it is subjected to temperatures below 42° F (6° C) or to water from any source. Waterborne sealers that are applied to improperly prepared surfaces, applied too heavily, allowed to puddle in joints and indentations, or that cannot dry properly, may become sensitive to water. Adhesion failure and softening of the coating may result. Application must not be made on surfaces previously treated with a water or stain repellent.

When applying SCOFIELD Selectseal-W with an airless sprayer or High Volume Low Pressure (HVLP) sprayer in environments where the air is very dry, the overspray may dry while still airborne. In these instances, the dried overspray (dry fall) will fall to the surface leaving a white, powdery residue. This material must be removed with a dry mop and the surface then lightly damp mopped prior to applying the next coat of sealer or a floor finish.

SCOFIELD Selectseal-W is a premium-quality sealing formulation and, like all such products, will require periodic maintenance and reapplication. Spills should be removed promptly and floors cleaned regularly to minimize possible staining and damage to the sealer.

WARNING!

SCOFIELD Selectseal-W must only be used in thin coats on interior surfaces that are adequately textured for slip resistance.

TEST SECTION

Sealing concrete flatwork takes skill and practice. Prior to general application, a representative jobsite test section must be prepared and sealed to verify and approve suitability, proper surface preparation methods, adhesion, safety, performance, wet and dry slip resistance, application techniques, and coverage.

4. Applicable Standards:

SCOFIELD Selectseal-W complies with applicable air-quality management regulations.



Floor coating and finishing material as to slip resistance only. 6L90

5. Sizes:

SCOFIELD Selectseal-W is available from stock in 1-gallon (3.8 L) and 5-gallon (18.9 L) pails.



6. Storage and Shelf Life:

When stored indoors in the original unopened containers and protected from freezing and prolonged storage at high temperatures, the shelf life of SCOFIELD Selectseal-W is at least 1 year from the date of purchase. Inventory must be rotated to maintain product that is within shelf life limits.

7. Composition and Materials:

SCOFIELD Selectseal-W is a proprietary, waterborne, one-component, acrylic-polyurethane formulation.

8. Textures and Slip Resistance:

Only uniformly slip-resistant concrete surfaces, such as broomed, swirl or sponge floated, sandblasted, exposed aggregate, most imprinted concrete, or concrete topped with SCOFIELD® Overlay™ or SCOFIELD® Texturetop®, should be considered for application of SCOFIELD Selectseal-W. Textures that are not slip resistant must be roughened by some texturing method such as shot-blasting or sandblasting. On flat interior floors extra precautions should be taken to ensure that the surface is not slippery.

For safety considerations, a representative jobsite test section must be prepared and sealed prior to general application and the entire surface inspected after completion to verify and approve the adequacy of wet and dry slip resistance.

9. Cautions:

WARNING!

MAY CAUSE EYE, SKIN, AND RESPIRATORY TRACT IRRITATION. DO NOT TAKE INTERNALLY. KEEP OUT OF THE REACH OF CHILDREN. Contains Ethoxylated Acetylenic Diols. Use only with adequate ventilation. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or clothing. Ensure fresh air entry during application and drying. If you experience eye watering, headaches or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear a properly fitted P100/organic vapor respirator (NIOSH TC-84A approved) during and after application. Follow respirator manufacturer's directions for respirator use.

First Aid: Eyes—DO NOT RUB EYES. Flush IMMEDIATELY with large amounts of water while holding eyelids apart. Skin—Wash thoroughly with soap and water. Remove soiled clothing and footwear and wash before reuse. Inhalation—Move to fresh air. If symptoms persist or develop or if ingested, get medical attention.

Wash thoroughly immediately after handling. Close container after each use. If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations. Do not reuse empty container. Before using or handling, read the *Material Safety Data Sheet and Warranty*.

10. Chemical Resistance and Staining:

Chemical resistance may vary depending on the condition of the concrete substrate, curing techniques, surface preparation, method of application, the length of time the chemical remains on the surface, and other factors. When chemical protection is required or resistance to staining is important, a representative test application should be made on the jobsite substrate to determine if the coating has suitable resistance. After the test application of SCOFIELD Selectseal-W has fully dried, a minimum of 14 days, the chemical in question should be applied and left on the surface for the maximum possible time it would remain under the expected conditions of service.

11. Equipment for Preparation and Application:

When using equipment and materials during preparation and installation, suitable protective gear must be worn and government regulations, manufacturer's instructions, and all applicable safety requirements must be followed.

Use of a pressure washer, a rotary floor machine, or a walk-behind scrubbing machine will facilitate surface preparation. A Jiffy Mixer should be used for mixing. An airless sprayer, High Volume Low Pressure (HVLP) sprayer, or SCOFIELD Sealer Applicator is required for application of SCOFIELD Selectseal-W. Hand-pump sprayers are not recommended because they cannot be used to apply the material uniformly. Application by roller will cause air bubbles to form in the sealer during installation and is not recommended. To effectively remove the SCOFIELD Selectseal-W residue before it hardens, all equipment must be thoroughly cleaned and rinsed immediately after use with clean water.

For preparation of older existing concrete, the pressure washer must be equipped with a fan tip and have a minimum pressure capability of 2000 psi (14 MPa). Hot water capability may facilitate cleaning of existing concrete. Nonmarking hoses are helpful.

For general preparation, the rotary floor machine must be heavy duty and operate at approximately 175 rpm. It may be equipped with brushes or with a pad driver that securely holds pads in place. A stiff-bristled bassine or nylon scrub brush is recommended. On flat interior floors, blue scrubbing or black stripping pads may be required. Walk-behind scrubbing machines should be considered for cleaning larger areas.

For mixing, use a metal mixing blade with a flat bottom (Jiffy Mixer from the Midwest Rake Company, 800-815-7253) fitted onto a heavy-duty, 1/2-inch (13 mm), variable-speed drill. During mixing, the drill must be used on its lowest rpm setting. Do not hand mix as hand mixing will result in improper curing and performance failure.

For general application, the airless sprayer must be of professional quality with a variable output fluid pressure of 1500–2500 psi (10–17 MPa). The sprayer must be fitted with a fan tip of 0.013–0.018 inches (0.33–0.46 mm).

For application, the HVLP sprayer must be of professional quality with a spray pressure capability of 30–70 psi (200–500 kPa) and should be used following the manufacturer's instructions.

For application by SCOFIELD Sealer Applicator on flat interior floors only, the applicator must be in good condition to ensure that the sealer is applied at a uniform thickness and that even coverage is obtained. An adequate supply of refill covers should be available so they may be changed whenever necessary. SCOFIELD Sealer Applicators for general application and SCOFIELD Sealer Trim Applicators for application on small areas are available from Scofield.

12. Preparation:

To quantitatively measure the Moisture Vapor Emission Rate (MVER) prior to application of SCOFIELD Selectseal-W, readily available calcium chloride test kits should be used as described in *ASTM F 1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride*. Refer to section 3. *Limitations* for MVER requirements. If a test kit is not available to test for moisture, a section of polyethylene sheeting may be taped tightly to the concrete surface as described in *ASTM D 4263 Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method*. If moisture is present on the underside after 24 hours, the MVER is too high for the application of SCOFIELD Selectseal-W.



Surrounding areas, landscaping, and adjacent surfaces must be masked or protected from overspray, spills, tracking, and equipment contact. When SCOFIELD Selectseal-W is used in confined areas, adequate ventilation and local exhaust must be provided.

The work area should be roped off, nearby vehicles removed, and appropriate sections closed to traffic. The surface should be divided into small work sections using walls, joint lines, or other stationary features as natural stopping points. Limit the side dimensions of each area to the width or length of typical concrete joint spacing. This allows for easier control of coverage, wet edge, and overlap.

SCOFIELD Selectseal-W is waterborne and must not be applied over a surface previously treated with a water or stain repellent. To reduce hard-water and alkali deposits, sprinklers and fountains should be adjusted to avoid wetting of the surface.

Except on surfaces stained with LITHOCHROME Tintura Stain, the concrete must be tested for water penetrability before applying SCOFIELD Selectseal-W. An indication of whether the concrete is penetrable can be obtained by spotting the surface with water. The water should immediately darken the substrate and be readily absorbed. If the water beads and does not penetrate or only penetrates in some areas, additional surface preparation and testing must be performed.

All areas to receive SCOFIELD Selectseal-W must be thoroughly cleaned. Before applying SCOFIELD Selectseal-W all washed or wet areas must be allowed to dry completely.

Newly placed concrete must be uniformly and adequately textured for slip resistance as described in section 8. *Textures and Slip Resistance*.

The concrete should be cured by the use of new and unwrinkled, nonstaining, kraft curing paper that conforms to ASTM C 171 *Sheet Materials for Curing Concrete*. After the concrete has sufficiently cured, typically 14–28 days after placement, and before application of SCOFIELD Selectseal-W, the Moisture Vapor Emission Rate of the concrete must be measured in accordance with ASTM F 1869 and must meet the MVER requirement. Curing time will vary with temperature and humidity.

Once the concrete has cured, the surface must be swept, and then pressure washed or scrubbed using a rotary floor machine prior to MVER testing. Use of a suitable, high-quality commercial detergent will facilitate cleaning. Care should be taken to completely remove any loose, unembedded antiquing release or other release agent that may have been applied since such material will adversely affect the adhesion of SCOFIELD Selectseal-W to the concrete. Additional cleaning methods are described below. The surface must be thoroughly rinsed after cleaning until the rinse water is completely clean. After MVER testing is complete and the MVER requirement has been met, SCOFIELD Selectseal-W should be applied.

Older existing concrete must have a uniformly slip-resistant surface. Textures that are not slip resistant must be roughened by some texturing method as described in section 8. *Textures and Slip Resistance*. The surface should be prepared as recommended by International Concrete Repair Institute (ICRI) *Guideline Number 03732* to provide a Concrete Surface Profile (CSP) between Number 1 and Number 2.

Before measuring the MVER and applying SCOFIELD Selectseal-W, all dirt, oil, and previously applied releases, curing compounds, and coatings must be completely removed. Failure to completely remove all contaminants and coatings that impede the penetration of the sealer into the concrete will cause appearance defects, adhesion loss, peeling, and reduced durability. Testing should be performed to verify that the cleaning or stripping methods and materials will not damage the concrete.

The cleaning method to be used depends on the surface finish and the condition of the concrete. Detergents, paint removers, or other commercial cleaners should be considered and tested. Pressure washing or scrubbing with a rotary floor machine is normally required. After cleaning, the surface must be rinsed to remove any remaining residue. Rinsing should continue until the rinse water is completely clean. Wet vacuums may be helpful to remove dirty water, particularly from interior floors. After drying, the surface must be carefully inspected and retested for penetrability. Additional general or spot cleaning and rinsing must be performed if necessary.

Acid washing may be required when the above surface preparation does not yield adequate penetration or if there are excessive alkali deposits or surface discoloration. Acid washing may also be beneficial to clean and brighten exposed-aggregate finishes. Since acid washing may affect the appearance or uniformity of the color, a representative area should first be tested. After preparation as described above, the surface should be acid washed using a solution of one part muriatic acid (20° Baume or 31.4% hydrochloric acid) to 20 parts water. Proper protective gear as recommended by the acid supplier must be worn. The reacted residue must be scrubbed using a low-speed floor machine equipped with a black pad and then thoroughly rinsed until the rinse water is clear and free of solids, a minimum of two times. After rinsing, neutralize the surface by washing with a solution of baking soda (sodium bicarbonate) and water, using 1 pound of baking soda per 5 gallons of water (454 g/19 L). Apply the solution until it stops fizzing. After neutralization, the surface must be rinsed thoroughly with clean water several times to remove soluble salts. Rinsing must continue until the rinse water is clean. Rinse water must be removed with a wet vacuum; rinse water left on the surface to evaporate may cause efflorescence. After rinsing is complete, a pH test must be performed using pH paper, litmus paper or a properly calibrated surface pH meter. A pH value of 7 or higher indicates that all acid has been neutralized. If the tested pH value is below 7 the neutralization step outlined above must be repeated until a pH value of 7 or more is obtained. After drying, the surface must be retested for penetrability as described above. Additional acid washing and rinsing must be performed if necessary.

All applicable federal, state, and local safety, disposal, and other regulations, including OSHA, must be followed.

Interior concrete floors topped with SCOFIELD Overlay must be sealed as soon as possible after installation of the topping as directed in the Scofield Tech-Data Bulletin *C-504 SCOFIELD Overlay*. Newly placed SCOFIELD Overlay surfaces may be sealed with SCOFIELD Selectseal-W 24 hours after installation. Prior to sealing, the SCOFIELD Overlay surface must be dry-buffed using a rotary floor machine equipped with a white pad. After cleaning, all dust and debris must be completely removed before SCOFIELD Selectseal-W is applied.

Exterior flatwork or interior floors topped with SCOFIELD Texturetop must be sufficiently cured to walk on without damage prior to sealing, at least 16–24 hours after installation at 70° F (21° C) and 50% relative humidity. Dust, slurry residue, or other contaminants must be removed from the Texturetop surface by light pressure washing before SCOFIELD Selectseal-W is applied. Do not use aggressive removal methods before the topping has adequately hardened, a minimum of 14 days after installation.

■ 13. Mixing:

SCOFIELD Selectseal-W is a one-component material. To blend ingredients that may have settled during storage, the sealer must be thoroughly mixed in its container using a variable-speed drill on its lowest rpm setting. During mixing, the mixing blade should be moved up and down and around the sides of the container, but must always remain below the surface of the liquid to prevent the entrapment of air.



14. Application:

The sealer should be applied on a calm day when concrete and ambient temperatures are between 50 and 90° F (10–32° C) and will not fall below 42° F (6° C). When interior heaters are required, temperatures and humidity must be moderate and consistently maintained. The surface must be dry and not subject to moisture that may interfere with the sealer drying properly. Application must not be made during rainy, foggy, or very humid weather when water condensation forms on the surface. On hot, dry days, application should be made during the cooler part of the day and when the concrete is cool and in the shade.

An airless sprayer, HVLP sprayer, or SCOFIELD Sealer Applicator must be used to apply SCOFIELD Selectseal-W. On small areas a SCOFIELD Sealer Trim Applicator may be used. An airless sprayer or HVLP sprayer must be used on vertical surfaces. Curbs and risers are easily spray coated. Application by roller will cause air bubbles to form in the sealer during installation and is not recommended.

If the SCOFIELD Selectseal-W has a milky, white appearance during application, it is being applied too heavily. If the material is allowed to puddle during application, the milky appearance may remain after drying.

Each coat must be applied thinly and uniformly. A wet edge should be maintained, and overlap controlled. Material should not be overapplied or allowed to puddle or collect in joint indentations. A brush or rag should be kept available to brush out or blot up excess material. On interior floors, when a SCOFIELD Sealer Applicator is used, the sealer must be spread thinly and evenly as far as possible without leaving streaks.

The first coat must be allowed to dry completely until it is tack-free before applying the second coat, normally a minimum of 4 hours at 75° F (24° C) and 50% relative humidity. The second coat must be applied at a 90-degree angle to the first coat.

On vertical surfaces, spray applications of SCOFIELD Selectseal-W should start at the bottom and proceed upward. Apply the material in a light coat while maintaining a wet edge to ensure penetration into the surface. Avoid overapplication and excessive rundown.

SCOFIELD Selectseal-W must be allowed to dry completely, normally 24–48 hours, before it is subjected to temperatures below 42° F (6° C) or to water from any source, such as hoses, sprinklers, condensation, or rain.

After the sealer is completely dry, the area may be opened to light use after a minimum of 24 hours and to general use after a minimum of 72 hours. The sealer gains strength during the first several days after application. Longer drying times are helpful and will be necessary if temperatures are lower or the humidity is higher.

All sealed surfaces must be thoroughly inspected to verify and approve installation and safety, including wet and dry slip resistance, before the area is opened to traffic. Sealed surfaces should be protected from damage by other trades.

15. Maintenance, Resealing, and Removal:

All maintenance and removal methods should be tested, and all surrounding areas should be closed to traffic, roped off, and protected.

For maintenance, sealed interior surfaces should be top-coated with a sacrificial floor finish to protect and maintain the original appearance and extend the period between reapplications of SCOFIELD Selectseal-W. After the final Selectseal-W application has been allowed to dry a minimum of 72 hours, a compatible, slip-resistant, emulsion-type, commercial floor finish should be used following the manufacturer's instructions and safety requirements. For recommendations, based on extensive product testing, or answers to your floor care questions, call the JohnsonDiversey 24-hour hot line: 800-558-2332.

For resealing, SCOFIELD Selectseal-W should be reapplied periodically as it is worn off the surface. The need for resealing will be accelerated in areas of heavy use or that receive frequent or aggressive cleaning. All dirt and contaminants must be completely removed from the surface of the sealer, and the surface thoroughly rinsed and allowed to dry. It is not necessary to strip the previously applied sealer from an interior floor unless the surface cannot be cleaned sufficiently. Wear paths, scratches, scrapes, and other areas where the sealer has been removed by wear or cleaning should be spot-sealed with SCOFIELD Selectseal-W using a fine-bristle brush or airless sprayer to feather the sealer into the surrounding surface. After the spot-sealed areas are completely dry, the sealer may be reapplied and slip resistance verified following the instructions in section 14. *Application*. Care must be taken so that excessive buildup of the sealer does not occur.

For removal of SCOFIELD Selectseal-W, use a commercial floor stripper formulated for urethane sealer removal following the manufacturer's instructions and safety requirements. Abrasive stripping may wear away softer concrete and test areas are recommended. Following the stripping procedure, the concrete surface must be thoroughly rinsed and allowed to dry. SCOFIELD Selectseal-W should then be reapplied and slip resistance verified following the instructions in section 14. *Application*.

16. Availability:

SCOFIELD Selectseal-W is marketed nationwide and internationally, directly to the user and through strategically located warehouses, dealers, and representatives. Contact Scofield for its nearest representative.

Scofield offers a complete line of engineered systems for coloring, texturing, and improving performance in architectural concrete. Scofield Systems address specialized requirements for interior, exterior and vertical uses with compatible systems of complementary products including coloring admixtures, color hardeners, colored cementitious toppings, stains, curing compounds, sealers, coatings, repair products and texturing tools. Visit the Scofield website at www.scofield.com for further information.

17. Warranty Summary:

For the complete warranty statement and important limitations, read the *Material Safety Data Sheet and Warranty*. Generally, Scofield represents and warrants only that its products are of consistent quality. No other oral or written statement is authorized. Any liability is limited to refund or replacement of defective product. The end user shall determine product's suitability and assume all risks and liability.



Suggested Short Form Specification for Sealing Concrete Flatwork:

All concrete, SCOFIELD® Overlay™, or SCOFIELD® Texturetop® flatwork designated as being sealed in the plans and specifications shall be sealed with two coats of SCOFIELD® Selectseal-W™ manufactured by L. M. Scofield Company, (800) 800 9900, Los Angeles, CA, (323) 720-3000, and Atlanta, GA, (770) 920 6000. SCOFIELD® Selectseal-W™ shall be applied full strength in accordance with Scofield's Tech-Data Bulletin B-504.



1 800 800 9900 or www.scofield.com

SCOFIELD PRODUCTS ARE INTENDED FOR PROFESSIONAL USE ONLY

■ **L. M. Scofield Company customer service:** 1 800 800 9900

Western Headquarters: 6533 Bandini Blvd., Los Angeles, CA 90040 **voice:** 323 720 3000 **fax:** 323 720 3030

Eastern Headquarters: 4155 Scofield Road, Douglasville, GA 30134 **voice:** 770 920 6000 **fax:** 770 920 6060

www.scofield.com