



# SCOFIELD® Formula One™ Liquid Dye Concentrate

A penetrating, translucent dye concentrate intended for dilution with acetone and subsequent application to colored or uncolored interior architectural concrete surfaces, particularly in the production of ground and polished concrete.

## TECH-DATA BULLETIN A-434.03

### 1. Product Description:

SCOFIELD® Formula One™ Liquid Dye Concentrate is designed for use on ground and polished, as well as other colored or uncolored interior architectural concrete installations. When added to acetone, it penetrates and colors interior concrete surfaces. After dilution, SCOFIELD Formula One Liquid Dye is used in conjunction with SCOFIELD® Formula One™ Lithium Densifier MP and SCOFIELD® Formula One™ Finish Coat.

### 2. Coverage:

After proper dilution with acetone, the resulting SCOFIELD Formula One Liquid Dye will cover 300–600 square feet per gallon (7–15 m<sup>2</sup>/L) per application, depending on surface conditions. The porosity, age, mix design and surface texture of the concrete will all affect the coverage rate.

### 3. Limitations:

SCOFIELD Formula One Liquid Dye will not perform properly on any surface where oil, dirt, coatings, sealers or other substances that would impede penetration are present. If contaminants remain on the surface, the penetration of the dye will be blocked. SCOFIELD Formula One Liquid Dye is intended for interior use only; exposure to sunlight will result in significant fading.

SCOFIELD Formula One Liquid Dye Concentrate cannot be used to hide surface blemishes and imperfections or to cover construction errors. Concrete from different loads or pours and in patched areas may appear significantly different in color when dyed than from that in adjacent areas.

Mottling and other color variations are likely to occur when using SCOFIELD Formula One Liquid Dye Concentrate. The color intensity and uniformity cannot be predicted without a jobsite test section. Refer to section 6. *Jobsite Test Sections*.

### WARNING!

ONCE SCOFIELD FORMULA ONE LIQUID DYE CONCENTRATE IS MIXED WITH ACETONE, THE MATERIAL WILL BE HIGHLY FLAMMABLE AND MAY CAUSE AN EXPLOSION OR FLASH FIRES. HARMFUL IF INHALED. A NONEXPLOSIVE VENTILATION SYSTEM MAY BE REQUIRED TO ACHIEVE PROPER VENTILATION. DURING USE AND UNTIL VAPORS ARE GONE, KEEP AREA PROPERLY VENTILATED AND KEEP AWAY FROM HEAT, SPARKS OR OPEN FLAMES. Refer to the acetone manufacturer's Material Safety Data Sheet and Cautions Section for further health and safety information.

### TEST SECTION

Producing ground and polished concrete flatwork, and other colored architectural concrete takes experimentation, skill and practice. Prior to general application, a representative jobsite test section must be produced and approved on each individual concrete surface for each color effect as described in section 6. *Jobsite Test Sections* to verify and approve suitability, proper surface preparation methods, adhesion, safety, performance, wet and dry slip resistance, application techniques, and coverage.

### 4. Color Effects:

SCOFIELD Formula One Liquid Dye Concentrate is available in 20 standard colors approximated on Scofield's Color Chart A-432 *SCOFIELD Formula One Liquid Dye Concentrate*. The color effect produced is unique to each concrete surface, and may differ significantly from that shown on the color chart. Experimentation with dye colors is required. Dye colors can be combined to create an unlimited number of color variations. A representative test section must be prepared on the jobsite concrete as described in section 6. *Jobsite Test Sections* to verify and approve suitability and color.

### 5. Textures and Slip Resistance:

Only surfaces that will have adequate texture to provide slip resistance should be considered for treatment with SCOFIELD Formula One Liquid Dye, SCOFIELD Formula One Lithium Densifier MP and SCOFIELD Formula One Finish Coat. After application, the slip resistance (Coefficient of Friction) should be determined to ensure that it is within established safety guidelines.

For safety considerations, a representative jobsite test section as described in section 6. *Jobsite Test Sections* must be produced prior to SCOFIELD Formula One Liquid Dye, SCOFIELD Formula One Lithium Densifier MP and SCOFIELD Formula One Finish Coat application. The entire surface of the test section must be inspected after completion to verify and approve the adequacy of wet and dry slip resistance.

### 6. Jobsite Test Sections:

To verify and approve suitability, appearance, and safety, representative test sections must be produced prior to general application of SCOFIELD Formula One Liquid Dye, SCOFIELD Formula One Lithium Densifier MP and SCOFIELD Formula One Finish Coat. Select an area that is in close proximity to the work area that has a similar concrete substrate and will be covered by another type of flooring material such as sheet vinyl, tile or carpet. Test sections should be of adequate size to be representative, and be produced by the same workers who will apply the SCOFIELD Formula One Liquid Dye, SCOFIELD Formula One Lithium Densifier MP and SCOFIELD Formula One Finish Coat using the contemplated application and grinding and polishing equipment and techniques. All test sections should be prepared and treated as specified to verify and approve the suitability of the product for its intended purpose. The entire surface of the test section must be inspected after completion to verify and approve the adequacy of wet and dry slip resistance.

### 7. Packaging:

SCOFIELD Formula One Liquid Dye Concentrate is supplied in bottles containing sufficient material to produce 1 gallon (3.8 L) of ready-to-use dye.

### 8. Storage and Shelf Life:

When properly stored in sealed containers, SCOFIELD Formula One Liquid Dye Concentrates have a shelf life of at least 2 years from the date of purchase. Inventory must be rotated to maintain product that is within shelf life limits.



### 9. Cautions:

#### WARNING!

**MAY IRRITATE EYES, SKIN AND RESPIRATORY TRACT. DO NOT TAKE INTERNALLY. KEEP OUT OF THE REACH OF CHILDREN.** Contains 4-Methyl-1,3-dioxolane-2-one.

First Aid: Eyes—DO NOT RUB EYES. FLUSH IMMEDIATELY WITH WATER. Hold eyelids apart while flushing material out thoroughly with large amounts of water. 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. In case of spillage, absorb with inert material and dispose of in accordance with applicable regulations. Do not reuse empty container. Before using or handling, read the *Material Safety Data Sheet and Warranty*.

### 10. Equipment for Preparation and Application:

All equipment and materials used must be compatible and safe for use with acetone. 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.

**For application**, use a hand-pump sprayer that is of professional quality, nonelectrical and designed for use with acetone. Follow the equipment manufacturer's instructions. For intricate work a fine brush or Preval sprayer can be used. Airless sprayers must not be used. After use flush the pump and tip with clear acetone, followed by clean water.

**For grinding concrete surfaces with a terrazzo grinder or concrete grinder prior to dye application**, the grinder should be capable of being equipped with a series of progressively finer grinding and polishing disks.

### 11. Substrate Preparation:

Surrounding areas, adjacent surfaces and adjoining walls must be masked or otherwise protected from spills, overspray, tracking, and equipment contact. Use masking materials that are not affected by acetone to prevent dye bleeding. The surface should be divided into work sections using walls, joint lines, or other stationary features as natural stopping points.

SCOFIELD Formula One Liquid Dye must only be applied to fully cured concrete that is a minimum of 28 days old to allow for adequate penetration of the surface.

Fully cured, wet concrete should be allowed to dry thoroughly prior to application of SCOFIELD Formula One Liquid Dye.

For ground and polished applications, the concrete must be ground to the desired initial surface profile prior to the application of the SCOFIELD Formula One Liquid Dye. Generally, grinding is best done after the concrete has fully cured.

### 12. Mixing:

SCOFIELD Formula One Liquid Dye Concentrate is packaged in liquid form which is mixed with 1 gallon of acetone prior to use. Pour the dye into the original 1-gallon container of acetone and stir approximately 2 minutes or until the color is

uniformly mixed into the acetone. If necessary, remove a sufficient quantity of acetone to provide the necessary head space for mixing; mark container with the name of the color. Always wear an approved respirator, protective gloves and safety glasses when mixing.

### 13. Application:

All surfaces must be clean, dry and, where applicable, ground to the desired initial surface profile prior to dye application. SCOFIELD Formula One Liquid Dye must be applied at the coverage rate given in section 2. *Coverage* and using the equipment described in section 10. *Equipment for Preparation and Application*.

Apply the SCOFIELD Formula One Liquid Dye uniformly in a consistent, overlapping circular motion, holding the spray tip approximately 12 inches above the concrete surface. If puddles appear on the surface the dye is being applied too heavily. SCOFIELD Formula One Liquid Dye will dry to the touch in 5–15 minutes. Following application of the first coat, wait 30 minutes and then wipe an area with a dry white cloth to establish color acceptability. Any dye remaining on the surface must be removed. Where applicable, continue the grinding and polishing process in accordance with Scofield Tech-Data Bulletin *B-424 SCOFIELD Formula One Lithium Densifier MP*. When application is complete flush the pump and tip with clear acetone, followed by clean water.

### 14. Availability:

SCOFIELD Formula One Liquid Dye Concentrate is marketed nationwide and internationally, directly to the user 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](http://www.scofield.com) for further information.

### 15. Limited Warranty:

Since no control is exercised over product use, L. M. Scofield Company (Scofield) represents and warrants only that its products are of consistent quality within manufacturing tolerances. NO OTHER ORAL OR WRITTEN REPRESENTATION OR STATEMENT OF ANY KIND, EXPRESS OR IMPLIED, NOW OR HEREAFTER MADE IS AUTHORIZED OR WARRANTED BY SCOFIELD, INCLUDING THOSE OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Liability for breach of contract, negligence, or on any other legal basis is limited to the lesser of refund or replacement of defective materials. SCOFIELD WILL NOT BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING FOR DELAYS OR LOST PROFITS. Communication of this warranty and its limitations to end users is not the responsibility of Scofield, but should be communicated by those in direct contract with the end user. Any claim regarding product defect must be received in writing within one year from the date of manufacture. No claim will be considered without such written notice or after the specified time interval. The end user shall determine the suitability of the products for the intended use and assumes all risks and liability in connection therewith.



**SCOFIELD PRODUCTS ARE INTENDED FOR PROFESSIONAL USE ONLY**

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