



SCOFIELD® Integral Color Utility Grade Liquid

An economical blend of synthetic iron oxide pigments for coloring below-grade utility encasements and excavatable concrete.

TECH-DATA BULLETIN TD-8815.02 Rev. 1.13.2015

1. Product Description:

SCOFIELD® Integral Color Utility Grade Liquid is a value blend of synthetic iron oxide pigments used to inexpensively add integral color to below grade utility encasements, excavatable concrete, Controlled Low Strength Materials (CLSM), and low strength geotechnical concrete.

Scofield Integral Color Utility Grade Liquid uses pigments that are weather resistant, lightfast, and alkali resistant. It contains a minimum of 30% post-industrial recycled material. It is ideal for coloring concrete designed to mark, identify, protect, and encase, utility conduit, pipes, wire cables, or fiber optic lines.

Colors: Utility Red, Utility Orange, Utility Yellow, Utility Black

2. Limitations:

Scofield Integral Color Utility Grade Liquid is not suitable for architectural flatwork, walls, or structural members. As recycled material is used to produce Utility Grade colors, they are not tightly controlled for hue, and visual color may vary. When developing Utility Grade Liquid concrete mix designs and recipes, always make, test, and evaluate the final mixture to ensure the desired color and performance properties are achieved.

3. Composition and Materials:

Scofield Integral Color Utility Grade Liquid contains no corrosive materials and will not initiate, accelerate, or promote corrosion of reinforcing steel, metal, plastic, or rubber encasements.

4. Dosage:

Typical dosage is 1.5-6.5 pounds of Scofield Integral Utility Grade Liquid material per 94 pound sack of cement. Classic concrete mix designs that use 5 sacks of concrete per cubic yard generally require 1 pound of material per sack of cement. Mix designs with very low levels of cement, heavily air entrained mixes, or low cement cellular mixes, may require higher doses to meet color specifications. Always evaluate mix designs as specified in this document under section 6. *Jobsite Samples*.

5. Concrete Mix Design Modifications:

Scofield Integral Utility Grade Liquid can influence the effect other admixtures will have on concrete properties. Water, Water Reducers (inclusive of Mid-Range or High-Range Water Reducer), and AEA (Air Entrainment Agent) are key ingredients that can require adjustment at dosages over 1 pound. When making any mix design modification, always perform a jobsite test as described later in this bulletin.

The following chart and guidelines are recommended for determining initial mix-design modifications. All final concrete proportions selected should be based on lab trial mixes and verified by larger field trial results.

Mix Design Modification Guidelines:

Ingredient	Recommendation	Comments
Water	Reduce water content by 40% of the total weight amount of color admixture used.	If water is not reduced, Slump, Flow, and w/c ratio may be impacted.
Water Reducer (WR) (Mid-Range or High-Range Water Reducer)	Reduce WR dose by 2% of the total weight of color admixture used. Fluid ounce reduction will be about 0.307 x total color dose in pounds.	If not adjusted higher than desired slump may result.
AEA*	Reduce AEA doses by 50% to 75% in designs that use AEA's.	If not adjusted, high air content may result.

* In mix designs that do not contain AEA, air content has been proven to not be influenced.

6. Preferred Use Procedures:

1. Mix or recirculate Scofield Integral Utility Grade Liquid until it is uniform in consistency.
2. Clean concrete mixer or mixing truck. Remove any previous cleaners, retarders, or traces of previous color.
3. Size the mix design to ensure the mixer is at least 1/3 full, or of a size that ensures mix uniformity within the prescribed number of mixing revolutions or mix time.
4. Introduce Scofield Integral Utility Grade Liquid.
5. Introduce water, sand, aggregates, and other admixtures in preferred order.
6. Introduce cement.
7. Mix as normally prescribed.

Modification of Preferred Use Procedures:

Order of addition changes may be necessary to accommodate split loads or plant conditions. Good results should be obtained when attention is paid to the following:

Scofield Integral Utility Grade Liquid may be added at any time as long as it is given the opportunity to mix until uniform. If not, streaking and uneven color within the concrete can result.

Scofield Integral Utility Grade Liquid can be added to the tail end of a load, or after part of a mixed load has been removed. If this is done:

1. Adequate mixing must be performed until the color is uniform.
2. Slump will likely be increased as water will not have been held from the batch.
3. If an AEA was used, air detrainment agent may be needed to avoid high air content.

7. Packaging

Scofield Integral Color Utility Grade Liquid is available in 250 gallon totes filled with 3,300 pounds of material.

8. Jobsite Samples:

Always evaluate mix designs for color and other performance properties by creating actual sample mixtures of at least 1 cubic foot in size. Test samples for compliance with job specifications. Ensure samples do not prematurely fail, or exceed compressive strength, shrinkage, or color parameters. Do not place mix designs into service that do not meet all job specifications.

9. Storage and Shelf Life:

DO NOT FREEZE! With regular mixing and stored at 40°F to 120°F (4°C to 49°C), Scofield Integral Color Utility Grade Liquid has a 1 year shelf life from date of manufacture. Product stratification and mild separation is normal after transit or prolonged standing. Should this occur, mix or recirculate until the mixture is uniform prior to use.

10. Cautions:

WARNING!

**DO NOT TAKE INTERNALLY.
KEEP OUT OF THE REACH OF CHILDREN.
EMERGENCY TELEPHONE NUMBER: CHEMTREC 1-800-424-9300.
FOR PROFESSIONAL USE ONLY.**

May cause eye or skin irritation. Safety goggles and impervious gloves are required.



FIRST AID: Eyes—Hold eyelids apart while flushing material out thoroughly with large amounts of water. Skin—Wash thoroughly with soap and water. Inhalation—Move to fresh air. If symptoms persist or develop or if ingested, get medical attention.

Wash thoroughly immediately after handling. Close package after each use. Before using or handling, read the *Material Safety Data Sheet and Warranty*.

■ **9. Availability:**

Scofield offers a complete line of engineered systems for coloring, texturing, and improving performance in architectural and utility 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.

■ **10. 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.



1 800 800 9900 or www.scofield.com

SCOFIELD PRODUCTS ARE INTENDED FOR PROFESSIONAL USE ONLY

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