

## PRODUCT DATA SHEET

# SikaColor-140 SG

Blend of synthetic iron oxide pigments for coloring ready-mix concrete or manufactured concrete products

### PRODUCT DESCRIPTION

SikaColor®-140 SG is an economical pre-measured admixture for integrally coloring ready mixed concrete during batching. Superior quality control during manufacturing and packaging helps to ensure your jobs will have uniform color from load to load. Previously named Select Grade® Integral Concrete Colorant and SCOFIELD® Integral Color SG.

### **USES**

- Concrete flatwork installations
- Vertical concrete installations
- Interior concrete floors and exterior concrete hardscapes
- Precast, tilt-up, shotcrete, overlays, and cast-in-place applications
- Municipal pavements
- Exposed aggregate
- Stamped concrete

### **CHARACTERISTICS / ADVANTAGES**

- 11 base colors create 44 standard colors
- Pre-measured repulpable bags
- Blend of UV-resistant synthetic iron oxides
- Uniform color load-to-load

### **APPROVALS / STANDARDS**

 ASTM C979/C979M-16 - Standard Specification for Pigments for Integrally Colored Concrete

### PRODUCT INFORMATION

Chemical Base	Synthetic Iron Oxide
Packaging	11 lb. (5 kg) fill in repulpable paper bag
	SikaColor®-140 SG is packaged for use in 5 or 6 sacks of cement per cubic yard concrete mix designs.
Shelf Life	60 months in original unopened container
Storage Conditions	Store in original, unopened containers, in dry storage
Appearance / Color	Available in 11 base colors. By varying the dose rate (bags/cubic yard), each base color can produce 4 different colors for a total of 44 standard colors.

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### TECHNICAL INFORMATION

### **Concrete Mix Design**

Concrete is recommended to have a minimum of 5 sacks of cement per cubic yard of concrete. Exterior concrete requiring freeze-thaw resistance is recommended to have a minimum of 6 sacks of cement per cubic yard of concrete. If cement substitutes such as fly ash or blast furnace slag are utilized, that mix should be used for all adjacent pours as it will affect the color. All cementitious material should be considered part of the cement content for dosage rate purposes. Concrete must be free of reactive aggregates and poured at the appropriate slump pertaining to the job. The water/cement ratio needs to be consistent throughout the entire project. In hot weather, the use of a retarder or hydration stabilizers should be considered. When an accelerator is needed during cold weather, choose a non-chloride accelerator. Do not use calcium chloride. SikaColor®-140 SG is compatible with most chemical admixtures and fibers. All concrete subject to freeze-thaw cycles should be adequately air entrained (typically 5-7%) as the mix design prescribes.

SikaColor®-140 SG is always consistent. Other variables can affect the appearance of concrete. Therefore, you must discuss your project with your Ready Mix supplier. The same cement, sand, and aggregates must be utilized throughout the project. Any deviations will affect the final color. Contact Sika with any questions concerning admixtures and mix design.

### APPLICATION INFORMATION

### **Recommended Dosage**

SikaColor®-140 SG base colors can be added to concrete in dosages ranging from 1 bag per 2 cubic yards to 3 bags per 1 cubic yard of concrete. Verify the standard color choice and the required number of SikaColor®-140 SG bags per cubic yard of concrete before batching begins. Do not open bags. Toss the repulpable bag into the mixer. This eliminates the mess and inaccuracy associated with the handling of loose colorants.

### **BASIS OF PRODUCT DATA**

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

### **LIMITATIONS**

- To avoid discoloration, do not store objects on colored concrete for at least seven days after placement.
- Do not use chloride-based accelerators.
- When a standard color is used at its lowest dosing rate,
   1 bag per 2 cubic yards, concrete mix design variations may produce a visible color variation.

### **ENVIRONMENTAL, HEALTH AND SAFETY**

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using

any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

### **APPLICATION INSTRUCTIONS**

Cast a job site mock-up before the installation for approval of color and finish. Utilize all materials, tools, and techniques from the actual job in the mock-up. Consistent batching, pouring, finishing, curing, sealing, and preparation techniques will ensure the uniformity of architectural concrete. Verify adequate wet and dry slip resistance. Maintenance requirements should also be discussed.

#### **BATCHING**

The mixer drum should be in good condition with little or no buildup on the fins. One-quarter (1/4) of the mixer volume is the minimum amount of concrete that should be batched to develop a consistent mix.

 When introducing color at the Ready Mix plant, first introduce the bags into the mixer, then batch the concrete.

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 When introducing color on the job site into a premixed Ready Mix truck, spin the drum in reverse until the concrete load backs up to the top.

Add the bags of SikaColor®-140 SG to the drum. Once added, ensure that any colorant retained on the fins is thoroughly mixed into the load by slowly reversing the drum so that the concrete contacts and removes the colorant from the fins. Rotate the drum at optimal mixing speed as the mixer manufacturer recommends for a minimum of 100 revolutions.

When using pea gravel or round stone mix, it is recommended to pour the color out of the bag and into the drum, as the rounded aggregate will not properly break up the bag. A minimum of 100 revolutions is recommended when working with a pea gravel mix design.

#### INSTALLING COLORED CONCRETE FLATWORK

#### Subgrade

The subgrade should be leveled and compacted to ensure a uniform concrete thickness during placing and finishing. The subgrade must be free of frost with no standing water. Before placing concrete in hot conditions, dampen the sub-base uniformly with water without pooling.

### Placing and Finishing

Once placing has begun, do not randomly add water to the mixer drum or the surface of the colored concrete. This will create color variations and a strength loss. Water may be added to the drum before initial discharge to attain but not exceed the specified slump. Once discharged, the specified slump must be maintained throughout the installation, particularly for adjacent concrete pours. Never retemper concrete that has started to set. Water-reducing and plasticizing admixtures may be used with SikaColor®-140 SG. The use of such admixtures may affect the finishing characteristics of the concrete. The use of SikaCem®-190 Concrete Control should be considered in hot or adverse conditions.

After placing and initial bull floating, no further finishing should be performed until the bleed water has dissipated, after which final finishing can occur. Closing with a steel trowel can diminish the effectiveness of air entrainment at the surface and should be avoided where freeze-thaw is a concern. Texture all exterior surfaces adequately and uniformly for slip resistance. For exterior installations, apply a broom finish or swirl finish using a float. When broom finishing concrete, shake off any water left on the broom after rinsing, as it may cause discoloration. Finishing techniques must be consistent. Differing finishing methods will change the appearance of the color.

### **Control Joints**

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The timely and correct placement of control joints minimizes random cracking of a concrete slab. Control joints may be introduced during concrete placement with a groover or after the concrete has reached the initial set by power sawing. Each method should be evaluated before installation and incorporated into the pre-job mock-up. Refer to American Concrete Institute publications for additional information: Guide to Concrete Floor and Slab Construction (ACI 302.1R-15), Joints in Concrete Construction (ACI 224.3-95).

### **INSTALLING VERTICAL-COLORED CONCRETE**

Unless a specific form liner has been specified, use a clean epoxy-coated or urethane-coated plywood form. Use non-leaking snap-tie cones. Clean and then tape or seal all joints to prevent leakage. Any bleed water leaking along joints may discolor the wall. Choose a release agent that does not discolor concrete. Do not use metal form ties or chairs within 1.5 in. (38.1 mm) from the surface.

Keep the slump consistent from load to load. Do not add water after a portion of the load has been discharged. Never retemper concrete that has started to set. Cast all walls in a continuous pour to their full height between engineered horizontal joints. When possible, use both external and internal vibrators. Vibrate the concrete in lifts up to 2 ft. (61 cm) or less. Do not touch the interior face of the form with the vibrator. Perform vibration long enough to consolidate concrete and dislodge entrapped air. Do not over-vibrate the concrete, as this can cause mix segregation.

Strip all forms when the concrete is the same age. Lightly sandblast all surfaces sufficiently to remove form marks and form release residue.

**Note:** Excessive sandblasting may expose sand and aggregates, substantially changing the color of the finished wall.

### **CURING AND SEALING**

Never use plastic sheeting or water spray to cure colored concrete; it will mottle and streak the surface. Use liquid, membrane-forming compounds. Use SikaCem®-100 Clear Guard®, SikaCem®-100 PRO 350®, or SikaCem® water-based sealers for exterior applications. Use SikaCem® water-based sealers for interior applications. Consult most current SikaCem® sealer local Product Data Sheets for complete Application Instructions.

### **MAINTENANCE**

Periodically inspect cured and sealed surfaces for wear or damage. Consult most current SikaCem® sealer local Product Data Sheets for complete Maintenance Instructions.



### **OTHER RESTRICTIONS**

See Legal Disclaimer.

### **LEGAL DISCLAIMER**

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

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