



PRODUCT DATA SHEET

SikaCem[®]-110 Surface Retarder 50

Water-based, biodegradable, low-odor top surface retarder

PRODUCT DESCRIPTION

SikaCem[®]-110 Surface Retarder 50 is a water-based, biodegradable, low-odor top surface retarder. When applied to the surface of fresh concrete, SikaCem[®]-110 Surface Retarder 50 chemically delays the set of the surface mortar while allowing the underlying concrete to harden normally. This allows time for washing the surface, producing exposed aggregate flatwork with subtle and varying reveals of texture and color. Previously named SurfEtch[™] 50 Top Surface Retarder and LITHOCAST[™] Surface Retarder 50.

USES

- Residential or commercial projects
- Poured-in-place flatwork
- Curbs, sidewalks, driveways, patios, pool decks, tilt-up and precast panels, and most horizontal concrete installations
- Can be applied over gray concrete, integrally colored concrete, and stenciled concrete

CHARACTERISTICS / ADVANTAGES

- Fully cured surface is attractive and slip resistant
- Low VOC
- Solvent-free
- Safer and cleaner to use compared to acid etching or mechanical blasting
- Color-coded with dye for easy identification
- Dye evaporates after application and will not color concrete

PRODUCT INFORMATION

Chemical Base	Water-Based
Packaging	5 gal. (18.9 L) fill in 5 gal. (18.9 L) plastic pail
Shelf Life	24 months in original unopened container
Storage Conditions	Store in original, unopened containers in cool, dry storage. Do not reuse the empty container. Do not freeze.

Appearance / Color**Tint Color:**

Dark blue

Finish:

Heavy sandblast texture

Aggregate Exposure:

3/8" to 1/2" aggregate exposure

The etch depth will vary with different mix designs, methods and timing of finishing, application consistency, temperature, and removal method.

APPLICATION INFORMATION**Coverage**

175-300 sq. ft./gal. (4.3-7.4 sq. m/L)

Coverage rate will vary with surface texture and application method.

Ambient Air Temperature

55-90°F (12.8-32.2°C)

Most concrete mix designs stop curing below 50°F (10°C).

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

- Do not apply to frozen surfaces, nor allow the material to freeze before washing to expose the aggregate.
- At higher temperatures, low humidity, or windy conditions, SikaCem®-110 Surface Retarder 50 may prematurely dry and lose effectiveness unless it is reapplied.
- Do not apply to concrete that contains cold weather accelerators or hot weather retarders without prior testing.
- Do not use SikaCem®-110 Surface Retarder 50 as a finishing aid.
- Hard-troweled surfaces will reduce the effectiveness of SikaCem®-110 Surface Retarder 50.
- Do not apply to vertical concrete or formwork.
- Do not apply to shake-on color hardeners, particularly if the surface has a hard-troweled finish, without prior testing and approval. The dense surfaces typically produced by shake-on color hardener may inhibit the etch depth compared to a plain concrete surface finished similarly.
- Do not apply curing and sealing compounds before applying SikaCem®-110 Surface Retarder 50.

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 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.

Proceed with the application after approval of the test area.

SURFACE PREPARATION**New Concrete**

Utilize the same concrete mix design throughout the installation. Finish the concrete uniformly level. High or low areas may retain or reject the material, possibly creating inconsistencies in the exposed finish. Concrete with a float or broom finish allows SikaCem®-110 Surface Retarder 50 to better penetrate the surface than hard-troweled concrete. Float open surfaces treated with an evaporation retarder or finishing aid before applying SikaCem®-110 Surface Retarder 50. Do not apply the material until the bleed water has dissipated.

Existing Concrete

When removing SikaCem®-110 Surface Retarder 50, the cement residue will bond to hardened concrete. Protect existing concrete with plastic sheeting or spray it with SikaCem®-110 Surface Retarder 50. Allow SikaCem®-110 Surface Retarder 50 to dry completely before installing the new concrete. The dried film of SikaCem®-110 Surface Retarder 50 will prevent the etched residue from penetrating or bonding to the concrete. Protect all adjacent surfaces from discoloration or damage from the chemical etching process.

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EQUIPMENT

Apply SikaCem®-110 Surface Retarder 50 with a pump-up sprayer, brush, or roller. Spraying is the most effective and consistent method of application. Use clean equipment free from water or solvent residues.

MIXING

Mix SikaCem®-110 Surface Retarder 50 with a powered drill. Do not hand mix. Mix at low speeds until the material is a uniform color. Do not dilute. The mixing time for a 5 gal. pail is 3-5 minutes.

APPLICATION

Apply an even coating of SikaCem®-110 Surface Retarder 50 to the concrete's surface. When spraying, utilize the lowest pressure possible to create a fan pattern. Apply the material evenly to achieve a masking, consistent color over the concrete. If an insufficient amount of top surface retarder is applied, premature drying may occur, affecting the exposure results. Heat, wind, and low humidity may also contribute to excessive drying. Cover the concrete surface completely with SikaCem®-110 Surface Retarder 50. For consistent exposure results, spray all concrete surfaces at the same time after completing concrete finishing.

Dwell Time

Do not work the surface with a float or trowel after applying SikaCem®-110 Surface Retarder 50. The material will dry in 1-2 hours, after which it will resist light rain. Before drying, protect SikaCem®-110 Surface Retarder 50 from rain by temporarily covering it with plastic and removing it as soon as the weather allows. Divert downspouts or other sources of substantial water exposure from flowing directly on the concrete after applying SikaCem®-110 Surface Retarder 50. Do not apply curing compounds over the surface retarder.

Removal and Exposure

Expose the aggregate by washing it within 6-24 hours after application, depending on the temperature and humidity, as determined by the approved mock-up panel. Use a garden hose and a new, clean broom or pressure washer to work the surface. Work in a small area. If the reveal depth is too deep, stop washing and let the concrete cure and harden further. Some concrete mix designs installed during elevated temperatures may require exposure to start sooner than 12 hours. Cold temperatures delay exposure. Achieve uniform exposure

by washing the surface simultaneously after the initial application of SikaCem®-110 Surface Retarder 50 to the concrete.

CURING AND SEALING

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.

Do not apply sealers to concrete substrate with moisture levels > 6% mass (pbw – part by weight) as measured with Tramex® CME/CMExpert type concrete moisture meter.

To protect the exposed aggregate finish, reseal the concrete with the same product initially used to cure it.

CLEANING OF TOOLS

Clean application tools with clean water immediately after use.

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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