

METHOD STATEMENT / INSTALLATION PROCEDURE

Edition 03.2021/v1

Sika® EmeriCrete® Topping

Installation of Separate Bonded Topping / Sikatop® Armatec-110 EpoCem®

The following method statement represents Sika Canada Inc's recommendations for the installation of a Sika® EmeriCrete® Topping as a separate bonded topping onto a saturated surface dry (SSD) concrete slab.

General	<ol style="list-style-type: none">1. Responsibility for control of conditions and adherence to the guidelines is the responsibility of the Contractor.2. Consult appropriate sections of CSA A23.1 -2019 and ACI 302 1R-15 for design and installation guidance.3. Job site conditions can influence surface drying and set time affecting the timing of topping application and finishing procedures. Experience is required to determine proper timing for required procedures.4. During cold weather open flame heaters shall not be used. Space heaters must be properly vented to avoid floor surface damage caused by carbonation or contamination.5. Hot or windy conditions may require adjustments to application procedures to offset rapid setting of topping surface. Ideally the building will have a roof and walls in place to protect from direct environment. Consider Sikafilm® to protect topping from the effects of excessive moisture loss in rapid drying conditions.6. Sika® EmeriCrete® Topping may only be used by experienced professionals.
Concrete Slab Preparation	<ol style="list-style-type: none">1. The concrete slab base must be sound enough to withstand the intended loads, this being determined by suitably qualified and responsible personnel.2. Minimum tensile bond strength shall be 1.5 MPa (210 psi) when tested in accordance with ASTM C-1583 Standard Test Method for Tensile Strength of Concrete Surfaces.3. All surfaces are to be roughened by chipping, rotomilling, scarifying or other appropriate mechanical means to provide a roughened substrate with a minimum 3 mm (1/8 in) profile in accordance with ICRI / CSP-6.4. All fractured concrete, loose particles, detritus and grease, oil, etc., is to be removed to provide a clean, sound and stable substrate.5. Non-corrosive mechanical anchors of suitable size to extend into the Sika® EmeriCrete® Topping to half its thickness are to be anchored into the concrete slab around all formed joint perimeters of the subsequent topping. Anchor positioning should be in 2 rows: one, 75 mm (3 in) from the slab perimeter at 300 mm (12 in) centres, the second, 150 mm (6 in) from the slab perimeter, again at 300 mm (12 in) centres but staggered in relation to the first row.6. The prepared concrete surface due to receive the Sika® EmeriCrete® Topping shall be kept continuously moist for a least one (1) hour, but preferably overnight, immediately prior to the placing of the topping. Remove excess water from the slab, such that the resulting surface is saturated, surface dry (SSD), before applying the Sikatop® Armatec-110 EpoCem® bonding agent. Consult the most recent version of Sikatop® Armatec-110 EpoCem® product data sheet for additional details and limitations.
Priming	<ol style="list-style-type: none">1. The prepared and pre-wetted concrete surface due to accept the Sika® EmeriCrete® Topping requires that Sikatop® Armatec-110 EpoCem® be used as a bonding agent.2. Apply the bond coat of Sikatop® Armatec-110 EpoCem® at a thickness of not less than 0.5 to 1.0 mm (20 to 40 mil) using a stiff brush or a suitable spray gun (such as a Goldblatt unit). For the best results, work the bonding grout well into the substrate to ensure complete coverage of all surface irregularities3. The Sikatop® Armatec-110 EpoCem® bonding slurry is ready to receive the topping mix when the bond coat is still tacky and fresh. Maximum permitted open/waiting times between the application of the slurry coat and the placing of the Sika® EmeriCrete® Topping are as follows: 16 hours at 10 °C (50 °F), 12 hours at 20 °C (68 °F), 8 hours at 30 °C (86 °F). If the bond coat is left beyond its open time, remove any surface contaminants, recoat with additional Sikatop® Armatec-110 EpoCem®, and then proceed.

Topping Installation	1. Mechanical shear mixers or a ready-mix truck are to be used to mix the constituents of the Sika® EmeriCrete® Topping. Note: We strongly recommend against manual mixing using a slow speed drill and paddle or similar equipment.
Mixing	<p>2. Water is to be used to clean and wet out the mixer, removing any material which might contaminate the topping mix; pre-wetting of the mixer is necessary to prevent reduction of the gauging water.</p> <p>3. Potable grade water is to be added to the Sika® EmeriCrete® Topping material; it should be measured to a dosage rate of approximately 8 % by weight of dry material; typically this is 2.0 to 2.25 L (0.53 to 0.60 US gal) per 25 kg (55 lb) bag of Sika® EmeriCrete® powder or 109 to 122 L (28.7 to 32.2 US gal) per 1360 kg (2998 lb) FIBC. The measurement of the water should involve the use of a suitable container which will enable accurate and repeated control of the water content and prevent over-dosing. The slump of the mixed Sika® EmeriCrete® Topping mortar is to be controlled to within Sika Canada Inc's recommendations.</p> <p>4. The pre-measured water must be emptied into the clean, pre-wetted mixer before the powdered Sika® EmeriCrete® material is added.</p> <p>5. A sufficient number of mixers of adequate size are to be used so as not to impede systematic placing of the Sika® EmeriCrete® Topping, in accordance with installation requirements.</p> <p>6. Mixers are to be strategically placed to ensure the least amount of disturbance of the topping mix during transportation to the point of placing.</p> <p>7. The mixing time is to be approximately five (5) minutes or until the mix is totally uniform and consistent, after which the Sika® EmeriCrete® Topping mix is to be placed immediately. Note: Any and all Sika® EmeriCrete® Topping mortar showing signs of premature setting or excessive slumping is to be discarded.</p> <p>8. Sika® EmeriCrete® Topping mix must be between 16 and 25 °C (61 and 77 °F) at the time and point of placing; consequently, care must be taken to ensure that the mixing water and the Sika® EmeriCrete® Topping powder are at a suitable temperature when mixing is undertaken.</p>
Placing	<p>1. Immediately following application of the SikaTop® Armatec-110 EpoCem® bond coat or within the permitted open/waiting times, the correctly mixed Sika® EmeriCrete® Topping mortar should be placed by suitable means onto the prepared and primed slab, avoiding segregation of the mix.</p> <p>2. Thoroughly compact and screed the topping mortar to the specified thickness; minimum 19 mm (¾ in), maximum 37 mm (1½ in). Material consumption at 19 mm (¾ in) will be approximately 59 kg/m² (12 lb/ft²), whilst at 37 mm (1½ in), it will be approximately 111 kg/m² (23 lb/ft²).</p> <p>3. The placing and screeding operation, which could influence both adhesion and finishing of the topping, must be continuous, without delays or interruptions</p> <p>4. The Sika® EmeriCrete® Topping should be placed in panels equal to existing joint spacing in the concrete slab.</p>
Finishing	<p>1. When the applied Sika® EmeriCrete® Topping has stiffened sufficiently to support the weight of a man but limits his imprint into the topping to a maximum depth of 3 to 6 mm (⅛ to ¼ in), proceed with compacting and floating using a Kelly or equivalent compactor.</p> <p>2. Power trowelling is then to proceed as soon as the Sika® EmeriCrete® Topping begins to stiffen and lose its surface moisture sheen.</p> <p>3. As the Sika® EmeriCrete® Topping stiffens further, proceed with final trowelling to the specified finish.</p> <p>4. Wet cure the topping using Sika® UltraCure NCF™ Single-Use Wet Curing Blanket for a minimum of seven (7) days at a minimum temperature of 10 °C (50 °F). The curing is to begin as soon after final finishing as possible and when foot traffic will not damage the finish.</p>
Joints	<p>1. All construction and contraction joints are to be filled with a hard, semi-elastic joint filler such as Sika® Loadflex® or Sika® Loadflex®-524 EZ.</p> <p>2. For best results, Sika® Loadflex® sealants should be installed when the majority of concrete shrinkage has occurred and joints are static.</p> <p>3. Care must be taken to ensure that any surface contaminants on the exposed joint surface are removed prior to installing joint fillers.</p>

Notes

1. It is the responsibility of the Contractor to ensure that sufficient labour, mixing equipment, finishers etc., are available to permit the continuous preparation and placing of the Sika® EmeriCrete® Topping in accordance with the preceding method statement.
2. It is the Contractor's responsibility to possess on-site the relevant Product Data Sheet and Safety Data Sheets for all products being used.
3. The Contractor is to provide protection from rain, wind, sun and other such elements that may detrimentally affect the placing and subsequent full curing of the Sika® EmeriCrete® Topping.
4. All operations should comply with CAN/CSA A23.1-2019 Concrete Materials and Methods of Concrete Construction and CAN/CSA A23.2-2019 Methods of Test and Standard Practices for Concrete
5. For further information, please contact Sika Canada at 1-800-933-SIKA or visit: www.sika.ca.

The information contained herein and any other advice are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. The information only applies to the application(s) and product(s) expressly referred to herein and is based on laboratory tests which do not replace practical tests. In case of changes in the parameters of the application, such as changes in substrates etc., or in case of a different application, consult Sika's Technical Service prior to using Sika products. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request or may be downloaded from our website at: www.sika.ca.

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