



## SECTION 07162

### CHEM-CRETE SOFIX CCC100

## Guide Specification

### Crystalline Concrete Penetrating Moisture Protection System

#### PART I - GENERAL

##### 1.01 DESCRIPTION

- A. Specified Work:
- Expansion and Contraction Joints: Section 0315\_\_\_\_\_.
  - Cast-in Place Concrete: Section 0330\_\_\_\_\_.
  - Sealants: Section 0790 \_\_\_\_\_.
  - Finishes: Section 0960 \_\_\_\_\_.
- B. System Description:
- The crystalline concrete penetrating moisture blocker system is a complete system of compatible materials manufactured by International Chem-Crete to create a moisture blocker and vapor retarder for **EXTERIOR** and **INTERIOR** concrete substrates.
  - The crystalline concrete penetrating moisture blocker protection system is designed for application on the specific type of substrate indicated on the drawings.

##### 1.02 QUALITY ASSURANCE

- A. Supplier: The Chem-Crete Sofix CCC100 crystalline concrete penetrating moisture protection system, as manufactured by International Chem-Crete, is approved for use on this project.
- B. Applicator: Applicators shall be approved by International Chem-Crete as certified applicators.

##### 1.03 SUBMITTALS

- A. Product Data: Product data and installation instructions are contained herein.
- B. Samples: Submit liquid samples of specified Chem-Crete Sofix CCC100 crystalline concrete penetrating moisture protection system.
- C. Limited Warranty: Upon completion of installation of the Chem-Crete Sofix CCC100 crystalline concrete penetrating moisture protection system, submit limited warranty within thirty days to validate warranty.

##### 1.04 PRODUCT DELIVERY, STORAGE & HANDLING

- A. Delivery: Materials shall be delivered in original sealed containers, clearly marked with supplier's name, brand name, type of material and MSDS literature.
- B. Storage and Handling: Recommended material storage air temperature is 70° F (21.1° C). Handle products to avoid damage to container. Do not store for long periods in direct sunlight. Do not allow product to freeze

##### 1.05 JOB CONDITIONS

- A. Environmental Conditions:
- Do not proceed with application of materials when substrate temperature is less than 40°F (4.4°C).
  - Do not apply unless surface to receive material

is clean, dry and sound.

- B. Safety and Health Conditions:
- During coating application, the maximum effort must be made to protect the applicator and others near the workplace from coming in contact with material on skin or in eyes.
  - Use proper safety clothing, eye protection and gloves.
  - If product comes in contact with skin or eyes, flush thoroughly with clean water.
- C. Protection:
- Keep products away from heat, sparks and flames.
  - Minimize or exclude all personnel not directly involved with the application process from the area.
  - After completion of application, do not allow heavy traffic on to treated surfaces for a period of at least 1 hour @ 75° F (23.9°C) air temperature.

#### PART II – PRODUCTS

##### 2.01 MATERIALS:

- A. Chem-Crete Sofix CCC100 Materials:
- Chem-Crete Sofix CCC100 crystalline concrete penetrating product.
  - Crack Filler: International Chem-Crete CEM 140 or other cementitious repair material approved by International Chem-Crete.
  - Sealant: International Chem-Crete Chem-Joint 65 or others approved by International Chem-Crete.
  - Cleaner: International Chem-Crete Biodegradable Conclean CCC 060.

##### 2.02 PERFORMANCE CRITERIA:

- A. Minimum performance requirements for the Chem-Crete Sofix CCC100 used on this project are:

CURED PRODUCT PERFORMANCE		
Description	Test Method	Results
Chloride Penetration	ASTM C 1218	Passed
Abrasion Resistance	ASTM C 944	1.17 grams / ft <sup>2</sup>
Water Vapor Trans.	ASTM E 96-95	82% Reduction
Adhesion	ASTM D 4541	400 PSI
Scaling Resistance	ASTM 672-98	Rating - 2
Static Slip Resistance	ASTM F 609	No Effect
Skid Resistance	ASTM E 303	No Effect
Freeze Thaw 150 Cycles	ASTM C 666	4.14 grams / ft <sup>2</sup>
Depth of Penetration	Visual - Law Eng	Average 192 mils

## PART III - EXECUTION

### 3.01 INSPECTION

- A. Verify that the work done under other sections meets the following requirements:
1. That the concrete substrate surface is clean, dry and sound.
  2. That the concrete was cured for a minimum of 7 days.
  3. That a water absorption test is employed to determine absorption of concrete substrate. Mist area to be treated with water. Water should readily absorb into concrete substrate, if water beads at surface the presents of a sealer is possible.
  4. Calcium Chloride moisture testing as per ASTM-F1869 must be accomplished prior to the installation of Chem-Crete Sofix CCC100 to determine the amount of moisture in the slab.
  5. That damaged areas of the concrete substrate be restored to match adjacent areas. Use CEM 140 or other cementitious repair material approved by International Chem-Crete.

### 3.02 PREPARATION

- A. Surface Preparation: Compressed air, pressure washing or any method of abrading can be used as proper preparation method to insure clean, sound concrete surface. Assure that concrete surface is free of any sealers, which may impede absorption of Chem-Crete Sofix CCC100 into concrete substrate matrix.
- B. Cleaning: Surface contaminated with oil or grease shall be vigorously scrubbed with International Conclean CCC060 biodegradable detergent. Thoroughly wash, clean and dry concrete substrate. Areas where oil or other contaminants penetrate deep into the concrete may require removal by mechanical methods.
- C. Moving Cracks: Route all large cracks, remove dust debris, and fill flush with Chem-Joint 65 or other flexible epoxy approved by International Chem-Crete.
- D. Moving Joints: Seal secondary control joints with Chem-Joint 65 or other sealant approved by International Chem-Crete. Consult International Chem-Crete for details on moving cracks, expansion joint details and moving control joints.

- E. Non-moving Control Joints: Seal secondary control joints with Chem-Joint 65 or other sealant approved by International Chem-Crete.
- F. Non-moving Cracks: Route all large cracks, remove dust debris, and fill flush with CEM 140 cementitious repair material or other cementitious repair material approved by International Chem-Crete.
- G. Surface Conditions: Surface shall be clean, dry and sound.

### 3.03 APPLICATION

- A. First Coat: Agitate Chem-Crete Sofix CCC100 in pail or drum to assure uniform dispersion of solids. Apply at a maximum square footage rate of 200 ft<sup>2</sup> (18.58 m<sup>2</sup>) per gallon (8 mils wft). Chem-Crete Sofix CCC100 can be applied using low pressure spray equipment, rollers, brooms or squeegees. Re-apply Chem-Crete Sofix CCC100 as necessary to keep application area wet with product for at least 30 minutes. Allow to dry 1 to 2 hours @ 70°F (21.1°C) before applying second coat.
- B. Second Coat: After first coat has been allowed to dry 1 to 2 hours @ 70°F (21.1°C), agitate Chem-Crete Sofix CCC100 in pail or drum to assure uniform dispersion of solids. Apply at a maximum square footage rate of 200 ft<sup>2</sup> (18.58 m<sup>2</sup>) per gallon (8 mils wft). Chem-Crete Sofix CCC100 can be applied using low pressure spray equipment, rollers, brooms or squeegees. Re-apply Chem-Crete Sofix CCC100 as necessary to keep application area wet with product for at least 30 minutes.
- C. Do not apply Chem-Crete Sofix CCC100 on exterior substrate if precipitation is forecast within 2 hours of coating completion @ 70°F (21.1°C) air temperature. If precipitation occurs during exterior application, discontinue application process immediately. Areas already treated with Chem-Crete Sofix CCC100 do not require protection.
- D. Allow to cure for one hour @ 75°F (23.9°C) air temperature before allowing light foot traffic.
- E. Allow to cure 48 hours @ 70°F (21.1°C). During the final curing stage, good circulation of air is needed and the room temperature and humidity should be kept close to normal operating conditions.
- F. Additional calcium chloride testing shall be accomplished after the Chem-Crete Sofix CCC100 installation to determine final moisture readings prior to floor coating or covering.

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