



SECTION 07190

CHEM-CRETE YUFIX CCC1000

Guide Specification

Concrete penetrating water repellent protection system

PART I - GENERAL

1.01 DESCRIPTION

A. Specified Work:

1. Expansion and Contraction Joints: Section 0315_____.
2. Cast-in Place Concrete: Section 0330_____.
3. Sealants: Section 0790_____.
4. Finishes: Section 0960_____.

B. System Description:

1. The concrete penetrating water repellent protection system is a complete system of compatible materials manufactured by International Chem-Crete to create a water repellent for **EXTERIOR** and **INTERIOR** concrete substrates.
2. The concrete penetrating water repellent 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 Yufix CCC1000 concrete penetrating water repellent 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 Yufix CCC1000 concrete penetrating water repellent protection system.
- C. Limited Warranty: Upon completion of installation of the Chem-Crete Yufix CCC1000 concrete penetrating water repellent 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).
- 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:

1. Do not proceed with application of materials when substrate temperature is less than 40°F (4.4°C).
2. Do not apply unless surface to receive material is clean, dry and sound.

B. Safety and Health Conditions:

1. 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.
2. Use proper safety clothing, eye protection and gloves.
3. If product comes in contact with skin or eyes, flush thoroughly with clean water.

C. Protection:

1. Keep products away from heat, sparks and flames.
2. Minimize or exclude all personnel not directly involved with the application process from the area.
3. 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 Yufix CCC1000 Materials:

1. Chem-Crete Yufix CCC1000 concrete water repellent penetrating product.
2. Crack Filler: International Chem-Crete CEM 140 or other cementitious repair material approved by International Chem-Crete.
3. Sealant: International Chem-Crete Chem-Joint 65 or others approved by International Chem-Crete.
4. Cleaner: International Chem-Crete Biodegradable Conclean CCC 060.

2.02 PERFORMANCE CRITERIA:

- A. Minimum performance requirements for the Chem-Crete Yufix CCC1000 used on this project are:

CURED PRODUCT PERFORMANCE

Description	Test Method	Results
Chloride Penetration	ASTM C 1218	Passed
Protection of Bridge Structures	NCHRP 244	Exceeds by 75%
Water Vapor Trans. Accelerated Weathering	ASTM E 96-95 ASTM G-23	82% Reduction No Effect
Freeze Thaw 150 Cycles	ASTM C 666	No Effect
Depth of Penetration	Visual - Low Eng	Average 76 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. 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 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 YufiX CCC1000 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 YufiX CCC1000 in pail or drum to assure uniform dispersion of solids. Apply at a maximum square footage rate of 200 ft² (18.58 m²) per gallon (8 mils wft). Chem-Crete YufiX CCC1000 can be applied using low pressure spray equipment, airless sprayer, or rollers. **Avoid allowing product to puddle.**
Note: Do not apply a second coat, second coat can not penetrate first coat! One coat application ONLY!
- B. Do not apply Chem-Crete YufiX CCC1000 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 YufiX CCC1000 do not require protection.

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