

## **SECTION 03 30 00 Cast-In-Place Concrete**

**Specifier Note:** This product guide specification is written according to the Construction Specifications Institute (CSI) 3-part format. The section must be carefully reviewed and edited by the Architect or Engineer to meet the requirements of the project and local building codes. Coordinate this section with other specification sections and the drawings. Delete all “Specifier Notes” when editing this section.

**Specifier Note:** This section covers StarSeal EF Cure series. StarSeal EF Cure [100] [500] [1000] is a dissipating resin-water based, membrane forming curing compound for use on new interior and exterior, horizontal concrete surfaces allowing for the concrete to reach maximum strength and wear resistance during the early hardening stage.

**Specifier Note:** StarSeal EF products are high performance building materials that are dedicated to reducing their environmental foot print by improving the environmental performance of buildings, the air quality of its inhabitant’s and reducing the effects of volatile organic compounds (VOC’s) on the environment.

**Specifier Note:** This guide specification is provided as a start point for the design professional. Any modifications to the specification are the responsibility of the design professional. Contact Vexcon Chemicals with any questions regarding this product.

**Specifier Note:** Before editing this section, consult with Vexcon to obtain complete product information on the curing material for the project.

### **PART 1 – GENERAL**

#### **1.1 SUMMARY**

- A. This section specifies StarSeal EF liquid membrane forming curing materials for new construction and major renovations

**Specifier Note:** Edit the list of related sections as required for the project. List other sections dealing with the work directly related to this section.

#### **1.2 RELATED SECTIONS**

- A. 033923.13- Chemical Compound Membrane Concrete Curing

### 1.3 REFERENCES

#### A. American Society for Testing Materials – ASTM

1. ASTM C 309 Standard Specification for Membrane Forming Curing Compounds

#### B. American Concrete Institute – ACI

1. ACI 308 Standard Practices for Curing Concrete
2. ACI 302.1 Guide for Concrete Floor and Slab Construction

#### C. American Association of State Highway and Transportation Officials – AASHTO

1. M-148 Liquid Membrane Forming Compounds for Curing Concrete

#### D. United State Green Building Council Leadership in Energy and Environmental Design – LEED

1. New Construction and Major Renovations 2.2v.

#### E. United States Environmental Protection Agency (EPA)

2. Method 24 - Determination of Volatile Matter Content of Surface Coatings

### 1.4 SUBMITTALS

#### A. Comply with section 013300 – Submittal Procedures

#### B. Comply with section 013100 – Project Management and Coordination/LEED Submittals

1. Obtain written certification from manufacturer on manufacturer's letterhead for all field applied sealants and coatings indicating compliance with LEED NC 2.2 EQ 4.1/4.2 Low Emitting Materials

- a. The Volatile Organic Compound (VOC) content in grams/liter or lbs./gallon. per EPA method 24, compliance with South Coast Air Quality District (SCAQD) rule # 1113 dated June 2008, the environment label and the declaration requirements of ISO 14020 and ACT 15 of the Federal Trade Commission guide on use of environmental marketing claims.

2. Provide documentation from manufacturer to validate compliance with LEED NC 2.2 MR 5.1/5.2 Regional Materials

3. Provide documentation from manufacturer indicating contribution towards LEED NC 2.2 MR 2.1/2.2 Construction Waste Management.

- C. Manufactures product data sheet: Include manufacturer's specifications, surface preparation, special notes and application instructions.
- D. Manufactures material safety data sheet
- E. Comply with section 017700 – Closeout Procedures

## 1.5 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Specialize in manufacture of membrane curing compounds with a minimum of 10 years successful experience
- B. Applicator shall have prior experience applying curing compound.
- C. Regulatory Requirements: Products shall comply with federal, state and local VOC regulations.
- D. Product shall contribute to LEED NC 2.2 points.

## 1.6 DELIVERY, STORAGE AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage: Store materials in clean, dry area in accordance with manufacturer's instructions. Keep containers sealed until ready for use.
- C. Handling: Protect materials during handling and application to prevent damage or contamination.
- D. Do not use materials beyond manufacturer's shelf life limits

## 1.7 PROJECT CONDITIONS

- A. Environmental Requirements
  1. Do not apply curing compound when surface temperatures are below 40°F
  2. Do not apply curing compound when surface temperatures are above 85°F
  3. Do not apply curing compound on windy days.
  4. Keep from freezing
  5. Mix well before each use

## PART 2 – PRODUCTS

### 2.1 Acceptable Manufacturer

A. Vexcon Chemicals 7240 State Road Philadelphia PA 19135  
Toll Free Technical Assistance 888.Vexcon1, fax 215.332.997, website [www.vexcon.com](http://www.vexcon.com)  
email [sales@vexcon.com](mailto:sales@vexcon.com).

B. Substitutions: Not permitted

### 2.2 Acceptable Material

**Specifier Note:** Refer to Vexcon Chemicals product data sheet or contact Vexcon to determine the appropriate curing compound to be specified. Edit this list to include only those products to be included in the work.

A. Product: StarSeal EF Cure [100] [500] [1000]

B. Description: Low VOC dissipating resin-water based, membrane forming curing compound allowing for the concrete to reach maximum strength and wear resistance during the early hardening stage.

C. Compliances:

1. US EPA method 24

a. VOC < 25 grams/liter or 0.42 #/gal

2. Meets all state, federal and local VOC clean air regulations including South Coast Air Quality District (SCAQD) rule # 1113 dated June 2008

3. ASTM C 309, Type 1 or Type 1D, Class A&B

4. AASHTO M-148 Type 1

5. LEED NC 2.2 EQ 4.2

6. US Army Corps of Engineers CRD C-300-(For StarSeal EF Cure 1000 only.)

## PART 3 – EXECUTION

### 3.1 APPLICATION

- A. Apply curing compound in accordance with manufacturer's written instructions.
- B. Apply curing compound at a uniform rate in accordance with manufacturer's written instructions.
- C. Apply curing compound immediately after final finishing and immediately after disappearance of surface moisture sheen.
- D. Curing shall be maintained for a minimum of seven (7) days or until seventy (70) percent of the specified concrete strength has been obtained.

**Specifier Note:** In areas where a subsequent topping is scheduled care must be taken to insure complete removal of the curing compound. Contact the Vexcon technical department for details.

### 3.2 PROTECTION

- A. During curing period, concrete shall be protected from damage by equipment, temperature change, jobsite activities, traffic, rain, and running water.

END OF SECTION