



SECTION 03 47 00 Site Cast Concrete

Specifier note: The purpose of this guide specification is to assist the Specifier in developing a project specification for the use of Vexcon Construction products. Edit guide specification in accordance with project requirements. Delete, modify, or add text as required. Coordinate with other sections for general requirements and related work. Obtain current copies of manufacturer's technical data sheet and other product literature before editing.

PART 1 – GENERAL

1.1 SUMMARY

Specifier note: This section covers the following Vexcon Chemical products for tilt-up concrete; ASTM C-309 compliant cure and bond breaker which prevents the adhesion of fresh concrete placed against existing concrete for the purpose of site cast, tilt-up and lift-slab concrete construction. Delete sections not applicable.

- A. Section includes:
1. [StarSeal Clean Lift – Water based, chemically non-reactive]
 2. [Certi-Vex Clean Lift – Solvent based, chemically non-reactive]
 3. [Certi-Vex Clean Lift AIM – Low VOC, Solvent based, chemically non-reactive]

Specifier note: Delete sections not applicable.

- B. Related Sections:
1. Section 03 30 00 – Cast-in-Place Concrete
 2. Section 07 19 00 – Water Repellents
 3. Section 09 60 00 – Flooring: Floor Finishes
 4. Section 09 90 00 – Paint and Coating: Finishing of Panels

1.2 REFERENCED STANDARDS

- A. ASTM C 309 Type 1, Class B – Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
- B. ASTM C 156-05 – Standard Test Method for Water Loss Through Liquid Membrane-Forming Curing Compounds for Concrete.
- C. ACI 301 – Specifications for Structural Concrete.

1.3 SUBMITTALS

- A. Comply with Section [01 33 00] [__ __ __].
- B. Product Data: Submit manufacturer's product data sheet. Include generic description, surface preparation, and application instructions.
- C. ASTM C-309/C-156 compliance. Submit manufacturer's independent laboratory test report certifying compliance.
- D. MSD Sheets indicating VOC content and safety precautions.
- E. Manufacturer's Quality Assurance: Submit manufacturer's certification that bond breaker complies with specified requirements and is suitable for intended application.
- F. Warranty: Submit manufacturer's standard warranty.
- G. LEED: Submit manufacturer's LEED Certification.
- H. Applicator Qualifications: Submit list of projects referenced as documented in this Specification under Quality Assurance Section.
- I. Quality Control Submittals:
 - 1. Provide protection plan of surrounding areas and non-work surfaces.

1.3 QUALITY ASSURANCE

- A. Comply with Sections [01400] [__ __ __].
- B. Manufacturer Qualifications: Manufacturer shall demonstrate that they have manufactured tilt up bond breaker products for a minimum of five years.
- C. Contractor Qualifications:
 - 1. Contractor regularly engaged, for past 5 years, in application of tilt-up bond breaker of similar scope to that specified.
 - 2. Employ persons trained for application of tilt-up concrete bond breakers.

Specifier note: A test application is recommended to determine coverage rate, performance. If a test application is not required, delete this section.

- D. Field Test Application/Mockup:
 - 1. Construct field test application of tilt-up concrete bond breaker for evaluation of surface preparation techniques and application workmanship.
 - 2. Construct field test application using same materials for use in the work accessible to all parties as directed by the architect.
 - 3. Mockups: Cast and erect tilt-up concrete panel mockups to demonstrate typical reveals, surface finishes, texture, color, and standard of workmanship.

4. Build mockup panels in the location and of the size indicated or, if not indicated, as directed by architect.
5. Do not proceed until workmanship of field test application is approved by architect.
6. Approved field test application: Standard for workmanship of tilt-up concrete bond breaker.
7. Subject to compliance with requirements, approved mockups may become part of the completed work if undisturbed at time of substantial completion.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Comply with Section [01 60 00].
- B. Deliver materials in manufacturer's original, unopened, sealed containers with all label identification intact.
- C. Store materials in unopened containers in dry, clean area between 45°F (7°C) and 100°F (37.8°C).
- D. Store materials in clean, dry area indoors, out of direct sunlight.
- E. Protect materials from freezing.
- F. Protect materials during storage, handling, and application to prevent contamination or damage.

1.5 PROJECT CONDITIONS

- A. Environmental Requirements:
 1. In accordance with manufacturer's recommendations substrate and ambient temperature shall be 40°F (4° C) and rising at installation time.
 2. Do not apply if frost is present on the substrate.
 3. Weather Conditions: In accordance with manufacturer's instruction, do not apply bond breaker in snow, rain, or mist or when such conditions are expected. Allow surface to attain temperature ranges and conditions recommended by manufacturer before proceeding with installation.
 4. Do not apply in rain or when rain is expected within 24 hours.
 5. Do not apply above 85°F (29°C) or below 40°F (4°C).
 6. Compliance: Follow manufacturer's instructions with regard to safety, health, and state and local environmental regulations.

1.6 WARRANTY

- A. Provide manufacturer's warranty under provisions of section (01700), (01740). Comply with manufacturer's warranty registration procedures.

PART 2 – PRODUCTS

2.1 MANUFACTURER

- A. Vexcon Chemicals
7240 State Road
Philadelphia, PA 19135
Phone: 215.332.7709
Fax: 215.332.9997
Email: techservice@vexcon.com
www.vexcon.com
- B. Substitutions: Comply with Section [01 60 00].

2.2 MATERIAL

Specifier note: Specify Vexcon Chemicals product [StarSeal Clean Lift], [Certi-Vex Clean Lift] or [Certi-Vex Clean Lift AIM]. Delete material not required.

- A. Water based, Chemically Non-Reactive Bond Breaker: Penetrating emulsion containing no oils, waxes, paraffin's, or silicones, meeting ASTM C-309.
 - 1. Product as basis of design: StarSeal Clean Lift by Vexcon Chemicals.
- B. Bond Breaker shall have the following minimum performance properties:
 - 1. ASTM C-309 Type 1, Class B
 - 2. ASTM D-2369 Solids: 28% minimum
 - 3. VOC content <350 grams/liter
- C. Solvent based, Chemically Non-Reactive Bond Breaker: Penetrating containing no oils, waxes, paraffin's, or silicones, meeting ASTM C-309.
 - 1. Product as basis of design: Certi-Vex Clean Lift by Vexcon Chemicals.
- D. Bond Breaker shall have the following minimum performance properties:
 - 1. ASTM C-309 Type 1, Class B
 - 2. ASTM D-2369 Solids: 30% minimum
 - 3. VOC content <600 grams/liter
- E. Low VOC, Solvent based, Chemically Non-Reactive Bond Breaker: Penetrating containing no oils, waxes, paraffin's, or silicones, meeting ASTM C-309.
 - 1. Product as basis of design: Certi-Vex Clean Lift AIM by Vexcon Chemicals.

- F. Bond Breaker shall have the following minimum performance properties:
 - 4. ASTM C-309 Type 1, Class B
 - 5. ASTM D-2369 Solids: 30% minimum
 - 6. VOC content <350 grams/liter

PART 3 – EXECUTION

3.1 GENERAL

- A. Coordinate site cat Tilt-Up operations with work of other trades in order that work may be expedited and omissions and delays avoided.

3.2 EXAMINATION

- A. Verify substrate conditions are acceptable for bond breaker installation in accordance with manufacturer's instructions.
- B. Do not proceed with work until any unsatisfactory conditions are corrected.

3.3 SURFACE PREPERATION

- A. Prepare surface in accordance with manufacturer's instructions.

3.4 APPLICATON

- A. Apply bond breaker according to manufacturer's instructions.
- B. Verify proper application rate and coverage is achieved in accordance with manufacturer's instructions.

3.4 SCHEDULE

- A. Apply bond breaker as directed on drawings.

END OF SECTION