

# KonCote Surface Products - ICF

An Exterior Surface Finish System for Insulated Concrete Form Construction (ICF)

Manufacturer's Specifications

## PART I - GENERAL

### 1.01 SUMMARY

This document contains the Manufacturer's requirements for the proper design, use, and installation of KonCote Surface Products System - ICF (Insulated Concrete Form). The KonCote surface coating consists of KonCote Regular Mix, a high-strength concrete compound with specially-blended additives; KonCote Bonding Agent, a high-solids, acrylic polymer resin; Colorant (if desired), a liquid dispersion colorant; KonCote Mesh Fiber Cloth, a fiberglass, open weave mesh; KonCote Sealer, a water based acrylic-emulsion sealer.

### 1.02 REFERENCES / PERFORMANCE

#### A. Per AC 219, "Acceptance Criteria for Exterior Insulation and Finish Systems"

1. ASTM C-666 ..... Freeze-Thaw Cycle Resistance
2. ASTM D2247 ..... Moisture Resistance

#### B. Per AC 39, "Acceptance Criteria for Walking Decks"

1. ASTM C-642 ..... Water Absorption
2. ASTM D2299 ..... Chemical Resistance
3. ASTM C348 ..... Flexural Strength
4. ASTM C190 ..... Tensile Strength
5. ASTM C882 ..... Shear Bond Adhesion
6. ASTM C994 ..... Abrasion Resistance
7. M11 810B ..... Mildew Resistance
8. ASTM C596 ..... Shrinkage

### 1.03 DEFINITIONS

A. **Installer:** An independent KonCote installer.

B. **KonCote:** Registered trademark for KonCote, Inc.

C. **MCI:** Manufacturer of KonCote products.

D. **Substrate:** The ICF or additional layer of EPS (expanded polystyrene) foam surface to which KonCote materials are applied for the surface finish.

### 1.04 DESCRIPTION

A. KonCote Surface Products System- ICF (Insulated Concrete Form). A cementitious coating consisting of KonCote mix, bonding additive, fiber mesh, and acrylic sealer.

B. Design Requirements:

1. Acceptable surfaces for the KonCote Surface Products System - ICF (Insulated Concrete Form) include ICF surfaces.

## KonCote Surface Products - ICF

1. Consisting of molded EPS manufactured with buried webs and/or ICF profiles with exposed webs when additional EPS is applied to the ICF surface covering the exposed webs. Contact KONCOTE for recommendations regarding other products.

2. Vapor Retarders: Use, type and location of vapor retarders, within a wall assembly, is the responsibility of the Architect and shall be noted on the project drawings and specifications.

3. The substrate shall be clean, flat, and smooth. There shall be no UV degradation of the EPS surface to inhibit adhesion of the coating materials.

4. Projecting surfaces and aesthetic details shall have a minimum slope of 6:12, and a maximum length (from the wall plane) of 305 mm (12 in).

5. The specified ICF profiles shall comply with all applicable code requirements for the construction type (combustible or noncombustible). Details shall demonstrate proper termination requirements for combustible or non-combustible construction (refer to published details from ICF manufacturer).

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C. Performance Requirements: At minimum, KonCote materials shall be tested as follows:

1. Water-Absorption Resistance: ASTM C-642
2. Chemical Resistance: ASTM D2299
3. Tensile-Bond: ASTM C190
4. Freeze-Thaw Resistance: ASTM C-666
5. 7. Water absorption: ASTM C-642

### 1.05 SUBMITTALS

A. Literature: Submit name of Surface Finish System Company that is being used, and the literature on the exact products that are to be used. Submit with the literature of the product's information including current MSDS sheets.

B. Samples: Prepare two 3' x 3' areas or suitable samples for review by the Architect. Do not proceed with Finish System until Architect approves the sample area. Leave one sample on jobsite, and one sample protected with the Architect.

### 1.06 QUALITY ASSURANCE

A. Manufacturer: All materials will be sold and distributed by KONCOTE, 1111 Highway 25 N., Buffalo, MN 55313; Telephone 877-682-6375; Fax 763-682-4762; Website [www.koncote.com](http://www.koncote.com) or an authorized dealer.

B. Installer: Only craftsmen who have a demonstrable skill in the work covered under this specification shall be contracted. A firm with a minimum of one (1) year's experience in the application of materials similar to those specified herein shall be used.

### 1.07 DELIVERY, STORAGE, AND HANDLING

A. All materials shall be delivered in original, unopened containers to the jobsite. Upon arrival, all materials should be inspected for any possible shipping damages.

B. All materials used on the project shall be stored in a place designated by the Owner or the Architect. Such storage place shall be kept neat, clean, and dry and between 40°-90°F and all damage thereto or to its surroundings shall be made good by the Contractor.

C. All used waste or trash must be removed from the building or site location each night, and every precaution taken to avoid the danger of fire.

D. The Installer shall protect surfaces and objects outside the building, as well as the grounds, lawns, shrubbery, and adjacent properties against damage. The installer shall hold himself responsible for damage to adjacent surroundings.

E. At completion of work, the installer shall remove from the premises all debris created by him; he shall remove all material splatters and leave his part of the work in a clean and finished condition.

### 1.08 PROJECT CONDITIONS

A. If applying below 40°F, check KonCote's recommended procedure.

B. Installer will need access to electric power and clean water at the installation area.

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### 1.09 WARRANTY

A. Product Warranty: KonCote warrants to Installer that the Products therefore shall be free from defects in material and workmanship for a period of one year from the date of shipment to Installer, and KonCote's liability shall be limited solely to the replacement of defective materials, as the case may be, which are proven to be defective upon a KonCote representative's inspection. For further warranty details, please contact KonCote..

B. Installation Warranty: Issued by the independent, installer to his retail customer and normally for a period of one (1) year. Additionally, an Installer may, at his option, issue an extended warranty and / or an annual maintenance agreement.

KonCote products must be installed in accordance with the Manufacturer's current, published specifications, product instructions, and installation procedures. Each installation is solely the responsibility of the Independent KonCote Installer. KonCote does not recommend and does not provide a warranty for use of KonCote products as any part of an Exterior Insulation Finish System (EIFS) applied over any framed structure, excluding architectural details which may be framed, sheathed and covered with expanded polystyrene board or cement board. Please contact KonCote for additional information.

### 1.10 Maintenance

A. Clean with a liquid or powdered laundry detergent (without bleach) in a normal solution of one cup to five gallons of water.

B. For resealing or other maintenance, please contact the Installer.

## KonCote Surface Products-ICF

### PART II - PRODUCT

#### 2.01 MANUFACTURER

All materials and components of the KonCote Surface Products System - ICF, shall be purchased directly from KonCote or an authorized dealer.

#### 2.02 MATERIALS

- A. Regular Mix - Portland cement and proprietary additives
- B. Bonding Agent- Acrylic polymer resin
- C. Colorant - Liquid dispersion colorant
- D. Fiber Mesh Cloth - Fiberglass weave mesh.
- E. Sealer - Acrylic polymer emulsion sealer

#### 2.03 COMPONENTS

Base Coat and Finishing Coats are created from the same components.

##### A. KonCote Regular Mix

- 1. Concrete compound with a blend of special cements and additives.
- 2. Bonds securely to properly prepared EPS surfaces.
- 3. Used to create protective surface finish for ICF construction.
- 4. Non-shrinking.
- 5. Used in thicknesses of 1/8" to 3/4".
- 6. Mixed on site with KonCote Bonding Agent (wet).
- 7. Available in 2 main finish types, KonCote Regular (fine) and KonCote G16 (textured).

##### B. KonCote Bonding Agent

- 1. High-solids, water-soluble, acrylic polymer compound used specifically for modifying a Portland cement composition such as Regular Mix.
- 2. Used to provide a superior bond to EPS surfaces.
- 3. Mixed with Regular Mix on site.

##### C. KonCote Mesh Fiber Cloth.

- 1. A balanced, open-weave mesh made from twisted multi-end strands.

##### D. KonCote Sealer

- 1. A penetrating, acrylic emulsion formulated with special acrylic polymers and quick evaporating solvents that dry to a hard, very durable polymer film.
- 2. KonCote Sealer is available in clear or custom colors available from KonCote.
- 3. Resistant to chemicals, acids, salts and detergents.
- 4. Provides a strong protective finish that resists cracking, chipping, peeling and mildew.
- 5. Resistant to freeze-thaw cycles.
- 6. Non-flammable.

### PART III EXECUTION

#### 3.01 EXAMINATION

A. Before installation of the KonCote Surface Products System - ICF, the Installer will ensure that the substrate is in accordance

with the guidelines listed in Section 1.04.B

B. Before installation, the Installer shall ensure all penetrations through and terminations of the substrate shall be protected with flashing or sealants in accordance with the requirements of the applicable code and the ICF manufacturer's published installation instructions.

#### 3.02 SURFACE PREPARATION

A. Substrate shall be clean, sound, and in accordance with applicable codes.

B. The EPS surface shall be clean, flat, and smooth. There shall be no UV degradation of the EPS surface to inhibit adhesion of the coating materials.

C. The specified ICF profiles shall comply with all applicable code requirements for the construction type (combustible or noncombustible).

Details shall demonstrate proper termination requirements for combustible or non-combustible construction (refer to published details from ICF manufacturer).

### **3.03 INSTALLATION**

- A. Mix one 50-lb bag of Regular Mix with 1 gallon of KonCote Bonding Agent [acrylic polymer resin] using an electric drill and proper mixing paddle to produce a smooth, lump free mixture. Add Colorant, if desired. [When using **KonCote Regular Mix, it may be used within 20-45 minutes**, depending upon air temperature; remix (if desired) during application to loosen mixture. (May be thinned by adding up to 1 qt. of water).
- B. Spray or trowel entire surface area with a light coat of KonCote mixture before applying the Mesh Fiber Cloth into the wet surface area.
- C. Lightly trowel mesh down into KonCote mixture.
- D. Continue with further applications of KonCote application(s) to completely fill and cover Mesh on surface area until mesh can no longer be seen.
- E. By using spray hopper assembly, or continuous PowerFlo unit, or hand troweling, apply initial application of KonCote mixture to entire surface and parge uneven areas to achieve smooth, level surface.
- F. Note: Before application of final texture coat, expansion (control) joints may be added. Expansion joints should be installed where stress cracking is indicated in horizontal or vertical surfaces; at each floor level; at changes or breakpoints in the wall substrate such as window or door openings; and at the surface structure's existing control or expansion joints. Note: After the final texture coat application, all joints must be caulked if required by architectural specs, capped with an expansion joint insert.
- G. Apply additional applications of KonCote mixture as needed to achieve proper coverage (minimum 3/16" completed thickness) and hand-trowel surface to desired texture, or allow sprayed application to remain as the (stucco-type) surface finish.
- H. To achieve a "worm-like" or scraped surface finish, use heavy grit KonCote, such as KonCote G16 Mix, and hand-trowel surface.
- I. Apply Caulking and approved weather stripping around all doors and windows, if needed. Note: This is not a substitute for specific flashing recommended by the Architect, or door and window manufacturers.
- J. After all KonCote applications have fully hardened, use airless paint sprayer or roller, along with cut-in brush, to apply 1-2 applications of KonCote Sealer (water base) as needed to protect surface and create the desired surface color.
- K. Never use solvent base sealers on the KonCote applications of any foam EPS surface as the solvents may deteriorate the foam through any pinholes left in the KonCote application.
- L. Ensure minimum 4 hours dry time at 72°F before surface contact with rain, dew, or freezing temperatures.

### **3.04 FIELD QUALITY CONTROL**

- A. Each installation is solely the responsibility of the Installer.
- B. KonCote assumes no responsibility for on-site inspections or application of its products.

### **3.05 CLEANING**

- A. Surrounding areas that are not to be surfaced with KonCote should be taped off and covered with plastic or paper.
- B. The Installer shall protect surfaces and objects outside the building, as well as the grounds, lawns, shrubbery, and adjacent properties against damage. The Installer shall hold himself responsible for damage to adjacent surroundings.
- C. At completion of work, the Installer shall remove from the premises all surplus materials and all debris created by him; he shall remove all Material splatters and leave his part of the work in a clean and finished condition.

### **3.06 PROTECTION**

- A. The KonCote Surface Products System - ICF shall be protected from damage and exposure to contaminants until fully cured.

### **DISCLAIMER**

KonCote Surface Products must be installed in accordance with the manufacturer's current, published specifications, product instructions, and installation procedures. Each installation is solely the responsibility of the Independent KonCote Installer. KonCote does not recommend and does not provide a warranty for use of KonCote products as any part of an Exterior Insulation Finish System (EIFS) applied over any framed structure, excluding architectural details which may be framed, sheathed, and covered with expanded polystyrene board or cement board.

**KonCote, Inc.**

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